Dedicated to Mr. TAICHI SHIBATA on the occasion of
the commemoration of his 61st birthday.

Mr. Taichi Shibata has been constantly very generous for and led us in collecting, observing and studying insects, surveying not only in Japan and Ryukyu Islands, but also in Taiwan and Malaysia, and publishing the results. He has also been guiding kindly to consist the Osaka Coleopterological Society and to proceed the Society works for all the members as the adviser thereof, for more than twenty-five years. In this year, when he attains his memorial birthday, we, the members of the Society listed below, have the honour to thank him by dedicating the present small but warm memorial publication rewarding him for his great guidance and unusual kindness.

And, we are much obliged to Messrs. Masafumi Ohkura, Dr. Masao Hayashi, Hiroshi Kôno, Hiroshi Ishida and Dr. Kohei Sawada, the managing directors of the Japan Colepterological Society for their kindness on issuance of the present publication.

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昆 蟲 学 評 論

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Two New Malaysian Tenebrionid-beetles with Note on *Falsogauromaia annulipes* PIC (Coleoptera)

By KIYOSHI ANDO

In the present paper, I would like to describe two new species belong to genera *Espites* and *Falsogauromaia*, with the redescription of *F. annulipes* PIC, and these species will provide a modest aid for study of the Malaysian Heteromera.

On the good occasion of celebrating the 61st birthday of Mr. TAICHI SHIBATA, adviser of the Osaka Coleopterological Society, I dedicate this small paper to him with my hearty thanks for his constant guidance and encouragement. Since Mr. T. SHIBATA published his first treatise in 1961, he has been continuing his coleopterological research and leading mercifully the members of the Osaka Coleopterological Society.

My cordial thanks are due to the members of the Osaka Coleopterological Society for their supporting me in various ways, and also to Mr. KIMIO MASUMOTO, Tokyo University of Agriculture, for his kind suggestions and loan of some materials.

Espites shibatai sp. nov. (Fig. 1)

Body elongate, moderately convex and weakly shining above ; black, mouth organs, basal four joints of antennae, coxae and abdomen somewhat reddish, pronotum with a pair of coral stripes, which dilated anteriorly and posteriorly, not reaching either basal or apical side, pro- and mesofemora at apical fourth with a coral ring, but the mesofemoral one incomplete, interrupted on hind side.

Head trapezoidal, almost flattened above, deeply and moderately punctured, the punctures lessened gradually along apical margin and toward occiput; clypeus well produced anteriorly, gently emarginate at apex, clypeal suture vague in middle, distincter on both sides, genae rather strongly expanded laterally, linearly convergent in apical half and rounded in the other half, eyes convex, distance between them about 2.3 times as broad as their transverse diameter, inner-ocular sulci deep, extending obliquely to near hind margin of eye, postgenae with a subangulate projection just behind eye, complicatedly sculptured on the ventral area, antennae fully passing middle of pronotum, 6th and 7th joints subtriangular, strongly projecting internally, from which to 11th dilated apically and loosely articulated to each other, 11th oval, hardly longer than broad; terminal joint of maxillary palpi subsecuriform, mentum trapezoidal, narrowed forward and with a longitudinal carina along middle, each side of the carina distinctly depressed, gula with some fovea-like punctures, which ill-defined by some deep rugosities.

Pronotum nearly 1.43 times as broad as long; lateral sides thickly bordered, gradually narrowed anteriorly from the broadest point situated at middle and slightly sinuate before base, apical margin broadly emarginate, weakly bordered on both sides, with angles gently produced, but rounded at apex, base deeply bordered and shallowly bisinuate, basal angles clearly rectangular; disc gently convex, finely and not sparsely punctured on major area, sparsely and obscurely so laterally. Scutellum triangular, hardly punctured, and acute apically.

Elytra elongate, evenly convex, subparallel at sides, which being very slightly expanded near apical third, marginal borders narrow; scutellar strioles long and distinct, punctate-striae very shallow, their punctures almost as large as on head, irregularly rather sparsely arranged medianly, becoming finer and closer posteriorly, intervals evenly flat, microscopically punctured, humeral calluses moderate; epipleura deeply bordered internally, the borders abbreviated before the level of 1st abdominal sternite.

Prosternum alutaceous and not punctured, with sparse, recumbent and yellowish pubescence, prosternal process elevated and indefinitely bisulcate between procoxae, then obliquely declivous backward and tapering gradually to rounded end. Mesosternum with a weak V-shaped ridge, in front of which densely graniculate-rugose. Metaster-

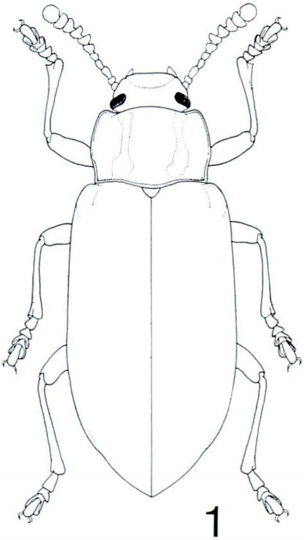


Fig. 1. *Espites shibatai* sp. nov., ♀.

num transversely convex along middle, minutely and somewhat rugosely punctured, but hardly so laterally. Abdomen with basal three sternites weakly rugose, moderately and closely punctured, but minutely and sparsely on lateral sides like on 4th and 5th sternites.

Legs relatively slender; femora thickened apically from near middle, finely punctured, tibiae thickened toward apex, with yellowish pubescence ventro-apically, protibiae substraight, meso- and metatibiae slightly curved outwardly, tarsi stout, beneath with felty yellowish pubescence, every 4th joint of pro- and mesotarsi and 3rd joint of metatarsi obliquely truncate, received the corresponding claw-joint on extreme base, claw-joints stout, clearly emarginate beneath and dilated apically, almost as long as the preceding two joints together, claws simple, quite directed laterally in basal part, then turned below in a right angle.

Length: 11.5 mm; width: 5.0 mm.

Holotype: ♀, Gap, Malaysia, 30. III. 1975, Y. KIYOYAMA leg. (in T. SHIBATA coll.).

The present species is near to *E. basalis* PASCOE, 1882, from New Guinea, but the color of body is black instead of being multicolor, the pronotum is minutely punctured, with a pair of coral stripes, while that of the latter is impunctate and without any maculae.

The new species is a new record for the genus from the Malay Peninsula.

Falsogauromaia annulipes PIC, 1921 (Fig. 2)

PIC, Mél. exot.-ent., (34): 22, 1921.

♀. Elongate, moderately convex above, black, mouth organs in part, gula and coxae dark reddish brown, femora with a ring dark reddish brown and occupying each major area.

Head transverse, half broader than long, rather densely punctured; clypeus semicircularly convex in middle, faintly depressed on sides, narrowly and slightly emarginate at middle of apex, clypeal suture transversely ◡-shaped, and very fine, genae linearly oblique, clearly raised on antennal scrobes, where arcuately prominent laterally beyond eye, (antennae missing from 7th joint), eyes small and a little convex, interocular space equalling three times transverse diameter of eye, inner-ocular sulci indistinct, apex of left mandible sharply bifurcate; terminal joint of maxillary palpi orderly securiform, that of labial palpi oblong, mentum ovoid, gradually ascendent anteriorly from basal third, with some long hairs and a pair of deep, oblique depressions, the depressions separated by a median longitudinal carina, submentum obscurely and triangularly depressed, area behind submentum rather steeply declivous and complicatedly sculptured, gula with a pair of sigmoid sutures and transverse rugosities.

Pronotum subcylindrical, almost as long as broad; apical margin

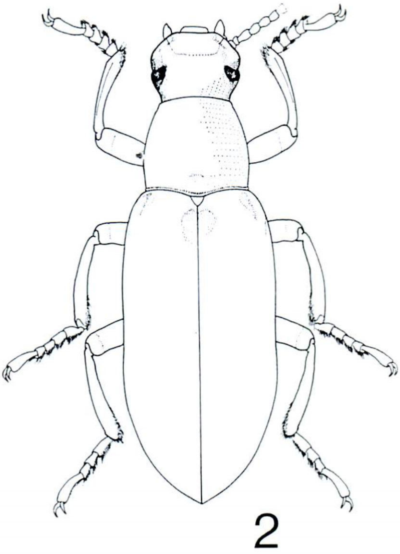


Fig. 2. *Falsogauromaia annulipes* PIC, ♀.

not bordered, lateral margins slightly, arcuately narrowed anteriorly from middle and subparallel posteriorly, each margin bounded from the propleuron by a shallowly impressed true margin, basal margin narrowly bordered, bi-emarginate, and weakly depressed in front of slightly produced middle; disc evenly convex, with shallow punctures not close and finer than on head. Scutellum small, not punctured, and rounded at sides.

Elytra elongate, gently convex, a little broader at base than pronotal base, the broadest point at apical third, sides slightly narrowed thence to apex; surface semicircularly depressed behind scutellum, shallowly and finely punctate-striate, their punctures suboblong, rather sparse but uneven in density, and almost as large as those on head, intervals subflattened and microscopically punctured, humeral calluses usually convex; epipleura oblique, not horizontal, clearly bordered internally, scarcely punctured.

Underside no punctures on the whole. Prosternum narrowed posteriorly, and shallowly rugose laterally, elevated and sparsely punctured between procoxae, behind which vertically declined and terminating in a protuberant tip. Mesosternum between the coxae with a low, lumpy and V-shaped ridge. Metasternum strongly convex and obliquely rugose in middle. Meso- and metepisterna nearly flat. Abdomen gently convex, basal three sternites shallowly and longitudinally rugose, shallowly and not closely punctured along middle, but the punctures on their lateral sides minuter and sparser, those on apical two sternites much minuter.

Legs relatively short, robust, unarmed and minutely punctured; tibiae thickened apically and curved internally, with yellowish pubescence on inner-apical half, front four tibiae somewhat twisted; tarsi beneath with compact pubescence, but sparser under claw-joints, claws glabrous, metatarsi with 1st joint almost as long as the total length of succeeding two joints, 3rd the shortest, and claw-joint subequal in length to the 1st and 2nd together.

Specimen examined: 1 ♀ (Length: 12 mm; width: 4.5 mm), Poling, Sabah, North Borneo, 4. V. 1981, M. TAO leg. (through the kindness of Mr. K. MASUMOTO).

Although the genus *Falsogauromaia* established by PIC in 1921, it is closely related to the genus *Gauromaia* PASCOE, distinguishable from the latter as the following points: 1) the body slimmer in shape; 2) the pronotum with wholly unbordered apical margin and vestigially impressed true lateral margins; 3) the metatibiae in the male beneath with a fovea near apex.

Falsogauromaia yamamotoi sp. nov. (Fig. 3)

♂. Body elongate, subparallel-sided, moderately convex and shining above, head and pronotum black with a metallic blue tint, the tint on clypeus, genae and narrow apical margin of pronotum greenish, elytra copper-purple in the major part, with lateral margins and epipleura metallic blue, underside less shining, black to dark reddish brown except for prosternum and latero-apical margins of abdominal sternites metallic green as well as tibiae, femora metallic blue; elytra with a baso-median and a pair of humeral spots bluish and margined by a metallic green tint, the baso-median spot triangular including scutellum, situated basally on both 1st intervals, gradually narrowed back and extended to near middle along suture, from where sutural intervals narrowly greenish apically, the humeral spot oval, occupying over basal fourth and situated from outer half of 3rd interval to inside lateral margin.

Head transversely subquadrate, nearly 1.6 times as broad as long (5.3 : 3.3, while in the preceding species 4.2 : 2.8); clypeus flatly convex, finely rather closely punctured, evenly arcuate apically but somewhat sinuate at middle, clypeal suture ◡-shaped and very fine, genae roughly punctured, uniformly arcuate, eyes a little more prominent laterally than genae but smaller, separated by a distance equal to 3.8 times their transverse diameter, frons slightly convex posteriorly, closely punctured, but sparsely in middle, antennae short, barely beyond the middle of pronotum, 3rd joint nearly twice as long as 2nd and longer than 4th, 7th triangular, 8th to 10th thin and slightly dilated apically, rather loosely articulated to each other, 11th quadrate, a little longer than broad; terminal joints of maxillary palpi (securiform) and of labial palpi yellowish brown at their apices, mentum ob-cordate, thickly bordered, strongly ascendent from basal third toward apex, with a

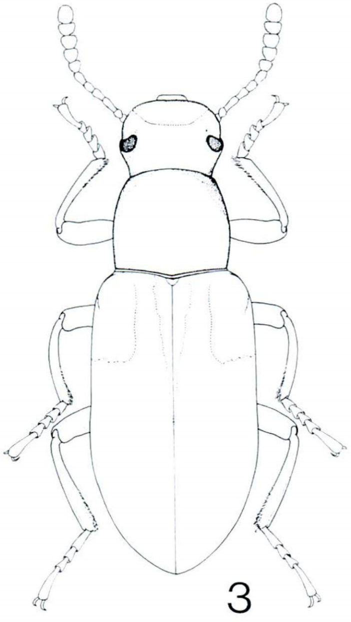


Fig. 3. *Falsogauromaia yamamotoi* sp. nov., ♂.

longitudinal median carina, each side of which irregularly and obliquely depressed, narrowly and shallowly furrowed inside lateral borders, submentum pentagonally depressed, roughly punctured, area between submentum and gula with an inverted-T impression in front of a usual and transverse depression.

Pronotum barrel-shaped, a little broader than long (4.0 : 3.7), basal margin broader than apical one, narrowly bordered, and somewhat produced posteriorly in middle, apical margin arched and unbordered, lateral margins arched weakly in basal two-thirds, then strongly to apex, true lateral margins incomplete, merely indicated as a short vestigial impression near base of prothorax; disc finely rather closely punctured throughout, slightly convex anteriorly and transversely depressed before basal margin. Scutellum triangular, scarcely punctured, rounded at apex.

Winged, but the wings as long as elytral middle length.

Elytra elongate, moderately convex; lateral sides parallel to each other and bordered, slightly divergent from base to posterior third, from there roundly convergent apically; striae fine but deep and not linked basally with each other, their punctures line-form, rather close and unequal in density, intervals nearly flat, scarcely punctured, 9th stria divided into two near apex; epipleura not horizontal, gently descendent and distinctly bordered internally, minutely and sparsely punctured.

Prosternum narrowed posteriorly, prosternal process unbordered throughout, swollen between procoxae, subhorizontal anteriorly and rather vertical posteriorly. Hypomera sparsely, shallowly and obscurely punctured, with weak and sparse rugosities. Mesosternum microreticulate, granularly rugose in basal half, with a low V-ridge sloping down anteriorly. Mesepimera microreticulate and sparsely punctured. Metasternum strongly convex, sparsely and minutely punctured along middle, obscurely, shallowly and moderately punctured laterally. Metepisterna flattened and not punctured. Abdomen with shallow and moderate punctures, those on lateral sides obscured by distinct, longitudinal rugosities, basal three sternites each with a weak depression basally on both sides.

Legs short and robust; femora gently dilated apically, more or less curved inward at apical third, finely and uniformly punctured, tibiae shorter than femora and more closely punctured than on femora, gently curved inward, each inner side with dense, short and yellowish pubescence in apical half, mesotibiae strongly bent in lateral view, metatibiae rather strongly dilated in apical half, from where longitudinally grooved internally to just before apical end, 1st tarsal joint of metatarsi nearly as long as 2nd and 3rd ones together, claw-joints shorter than the preceding joints together.

♀. Head finely and rather sparsely punctured, genae distinctly produced laterally beyond eye, pronotum a little broader than in ♂ (4.0 : 3.5), with fine punctures like on head, but narrowly glabrous along apical margin, tibial curvature moderate, inside of metatibiae without groove, 1st joint of metatarsi shorter than the succeeding two joints together.

Length : 14.0–15.0 mm ; width : 5.0–5.5 mm.

Holotype : ♂, Sepilok, North Borneo, 11. V. 1981, M. YAMAMOTO leg. (in T. SHIBATA coll.). Paratype : 1 ♀, Sepilok, North Borneo, 12. V. 1981, M. YAMAMOTO leg.

The present new species is closely related to *F. cyanipes* PIC, but it is separable by the distinct humeral patches of elytra and the shorter body.

A New Species of Scaphidiidae from Taiwan (Coleoptera)

By FUMIAKI KIMURA

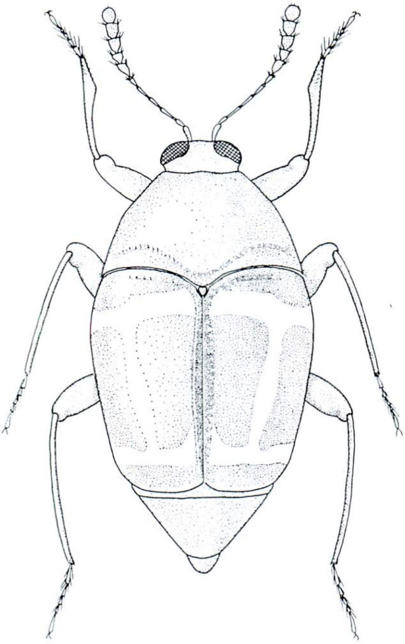
In this paper I would like to describe a new peculiar species of the genus *Scaphidium* from Taiwan.

I wish to express my thanks to Mr. TAICHI SHIBATA for his kind advice and help over several years. Also I wish to thank the members of the Osaka Coleopterological Society for their encouragement and continuous supports.

Scaphidium shibatai sp. nov. (Fig. 1)

♂. Body suboval, moderately convex above, shining and black, clypeus, mouth-parts, funicle of antennae, and tarsi reddish brown, each elytron with two, anterior and posterior, transverse fasciae and two, median and marginal, vittae, all clearly orange-red, the fasciae arrived at sutural stria from inside of lateral margin, each fascia never linked with the opposite one upon suture, the anterior fascia running rather obliquely from behind humeral angle to near scutellum, shallowly emarginate in front on lateral part, the posterior fascia substraight, situated at apical 5th of elytral side-length, prolonged forward along sutural stria, the vittae substraight and connected with each fascia, the median vitta lengthened obliquely a little from lateral 3rd of anterior fascia to about middle of posterior fascia, slightly dilated near middle, the marginal vitta very narrow along lateral margin, and arrived at both lateral ends of the anterior and posterior fasciae.

Head subflattened, sparsely and minutely punctured except on clypeus and vertex, clypeus subtrapezoidal, slightly expanded toward substraight apex, eyes weakly convex laterally, shallowly sinuate in front, interocular space nearly 1.2 times as wide as the diameter of eye. Antennae (Fig. 2) slender, 3rd or 4th joint nearly 1.5 times as long as 2nd, and a little longer than 5th (5 : 4), 6th a little longer than 2nd (6 : 5), 7th to 11th forming a slender club, 7th and 8th subtriangular, each about a half longer than wide (7th, 1.0 : 1.6, 8th, 1.0 : 1.4), 9th triangular, almost as long as wide, 10th also triangular and widest, 11th circularly



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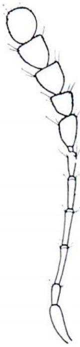

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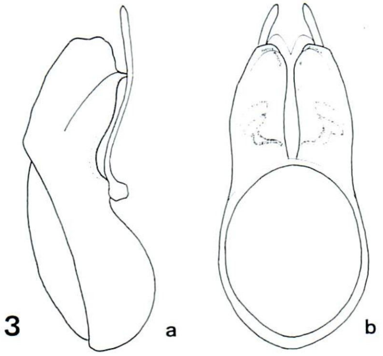
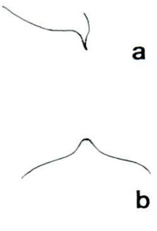
Figs. 1, 2. 1. *Scaphidium shibatai* sp. nov., ♂. 2. Right antenna of *Scaphidium shibatai* sp. nov., ♂.

rounded. Labrum subpentagonal, with several setae, mandibles short and robust, biforked at apex, maxillary palpi short, 3rd joint as long as 2nd, expanded apically and strongly rounded at outer side, 4th bullet-shaped, twice as long as 2nd, pointed at tip, labial palpi slender, 2nd joint short, mentum subsquare and submentum quite transverse.

Pronotum well convex and subtrapezoidal, nearly 1.5 times as wide as long, lateral sides more sinuate than usual, and roundly narrowed in front half, apical side distinctly bordered like lateral sides, and widely emarginate, basal side regularly bisinuate, front angles subrectangular, but somewhat projecting forward, hind ones acute; disk sparsely and minutely punctured as on head, subbasal transverse punctate-impression more or less shallow. Scutellum subtriangular, a little longer than wide, smooth, and rounded at apex.

Elytra oblong, a little longer than the width at basal 4th, with fine, shallow, irregular and unequal-sized punctures, which arranged partly





Figs. 3, 4. Aedeagus of *Scaphidium shibatai* sp. nov., ♂.
3. a, lateral aspect; b, dorsal aspect. 4. Apex of median lobe.
a, lateral aspect; b, baso-ventral aspect.

in some longitudinal rows, apical side substraightly truncate, each sutural stria entire, clearly impressed and extended along base to near humeral angle. Propygidium and pygidium sparsely and minutely punctured, reticulately microsculptured on each basal area.

Under surface almost smooth, mesosternum distinctly ridged baso-medianly, metasternum shallowly and triangularly depressed between coxae, covered with blondish and wool-like hairs, abdominal sternites reticulately microsculptured. Legs moderately long, front femora shallowly grooved from basal 4th to near apex on inner side, front tibiae triangularly expanded before middle of inner side, but hind four tibiae weakly curved inside, 1st segment of middle and hind tarsi a little longer than the succeeding two segments together.

Aedeagus (Fig. 3 a, b) moderately sclerotised, median lobe comparatively wide and short, subrectangularly curved ventrally at apex (Fig. 4 a, b), inner sac with thick dorso-posterior sclerites and thin dorso-anterior ones, lateral lobes slender.

Body length: 6.8 mm.

♀, unknown.

Holotype: ♂, Mt. Lishan, Taichung Hsien, Taiwan, 26. VII. 1984, F. KIMURA leg. (T. SHIBATA coll.).

The present species belongs to subgenus *Scaphidium*, and is comparatively close to *S. shirakii* MIWA et MITONO from Taiwan in general appearance and elytral sculpturea, but it is easily distinguished from the latter by the following characters; each elytral pattern orange-red, consisting of two transverse fasciae and two longitudinal vittae, the antennal club slenderer, the median lobe of aedeagus with subrectangularly curved apex, and the body a little slenderer.

The specific name is dedicated to Mr. TAICHI SHIBATA.

The Two New Species of the Genus *Tachinus* GRAVENHORST (Coleoptera: Staphylinidae) from Japan and Taiwan

By YASUHIKO HAYASHI

Up to the present, only three species of the subgenus *Latotachinus* of the genus *Tachinus* have been known from Asia. Two of them were reported from Japan and another one from Bhutan. In this paper I propose to describe two new *Latotachinus*-species of Japan and Taiwan. These new species are individually very different in the male genitalia from the known *Latotachinus*-species, and have narrow protarsi even in the male, which are one of the most important characters of the subgenus.

Acknowledgement

It is my great pleasure to have my report printed in the essays contributed in celebration of the 61st birthday of Mr. TAICHI SHIBATA, the advisor of the Osaka Coleopterological Society.

About thirty years have passed since I became acquainted with Mr. T. SHIBATA, and more than twenty years since I began to study under him. During the period he has constantly given me every facility for my studies of Coleoptera. Thanks to his kind guidance, I have been able to report the results of my research.

In this commemorative chance I would like to express my heartfelt thanks to Mr. T. SHIBATA for the cordial guidance and helps to my coleopterological study. And I sincerely hope that Mr. T. SHIBATA will be in good health and continue his activities in coleopterology or cultivating the rising generation.

Also I am deeply grateful to the members of the Osaka Coleopterological Society for their kindness of constantly offering various facilities.

Tachinus (*Latotachinus*) *shibatai* sp. nov. (Figs. 1–7)

♂ : Body stout, subparallel-sided and well shining above; dark reddish brown, mouth organs pale yellowish brown except pitchy mandibles, antennae, pronotum, elytral narrow margins, abdominal segments on hind halves and legs light reddish brown. Length: 4.9–5.5 mm.

Head a little less than a half as broad as pronotum, weakly depressed behind antennal insertions, finely and sparsely punctate, with microsculpture consisting of transverse lines, which is always visible, fine and weak on clypeus but strong and narrow just behind fine clypeal suture; clypeus finely and sparsely pubescent. Eyes of moderate size, well prominent and a little longer than postgenae, postgenae straight

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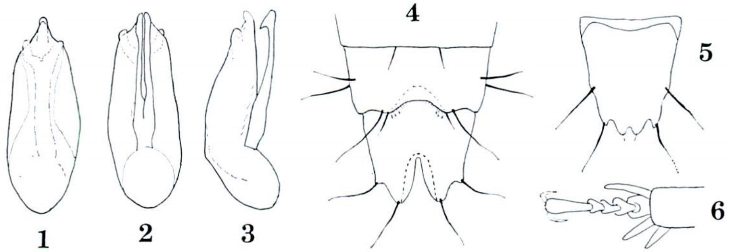
〔Ent. Rev. Japan, Vol. XLII, Suppl., pp. 13–19, Dec., 1987〕

and weakly convergent backward. Antennae thick and stout, rather long, fully beyond pronotal base and weakly thickened distally from 2nd to 10th; basal 4 segments polished, basal 3 and 11th segments fairly but 4th slightly longer than broad (less than 5 : 4), 5th to 10th more or less broader than long, and each segment with relative length as followings: 10-5<-7-5<-5<-5-5-5<-6-6-11. Mentum and submentum coarsely and strongly punctate, with distinct and transversely linear microsculpture, the punctures much sparser on submentum than on mentum; gular plate broad, impunctate but microsculptured as on mentum, and gular sutures strongly impressed.

Pronotum broader than long (about 4 : 3), nearly as broad as and shorter than elytra (3 : 4) and broadest at basal third; sides uniformly and weakly arcuate, apex narrower than base, substraight but weakly produced forward at the rounded apical angles, base weakly arcuate backward, basal angles obtuse and narrowly rounded; disc almost glabrous, finely and sparsely punctate (the punctures finer than those on head), very weakly impressed medianly from middle to near base, and only microsculptured on lateral areas by distinct transverse lines, the area narrowed backward.

Elytra subsquare, almost as long as broad, quite parallel-sided, sides straight, shoulder each bearing a few small denticles marginally, apical margin weakly emarginate in middle but weakly arcuate laterally, and latero-apical angles narrowly rounded; disc somewhat uneven, without visible microsculpture, very strongly punctate, the punctures coarse, moderate in density, long-oval, becoming shallow and small near apex and with a short recumbent hair, which is shorter than longitudinal diameter of the puncture.

Abdomen weakly narrowed backward, without any visible microsculpture, much more coarsely and strongly punctate on 3rd to 7th segments than on elytra, the punctures elongate-oval, rather denser and a



Figs. 1–6. *Tachinus shibatai* sp. nov.
1. ♂ genitalia, dorsal view; 2. ditto, ventral view; 3. ditto, lateral view; 4. ♂ 6th, 7th and 8th sternites; 5. 8th tergite; 6. ♂, protarsi.

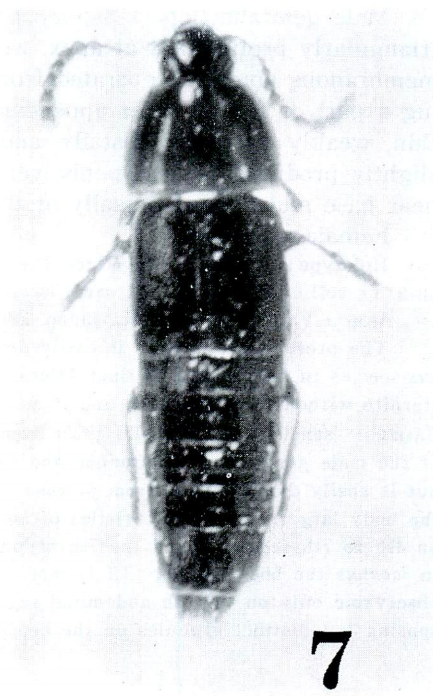

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Fig. 7. *Tachinus shibatai* sp. nov.

little smaller on sternites than on tergites, also becoming much smaller (rather fine) and sparser on apical 3rd or 4th of each segment, 8th segment finely and very sparsely punctate, 4th to 7th provided with a long, stout and black bristle (lateral bristle) at about middle of each extreme side (the lateral bristle arising actually from each sternite), basal 2 visible tergites with a pair of small tomentous flecks at middle, and basal 4 visible sternite with a pair of broadly separated, long and black setae at each apex; 8th tergite (fig. 5) quadri-lobed at apex, inner pair of the lobes rounded at tip, each of outer ones subacute, reaching level of extreme base of median emargination and with a bristle, lateral sides with a bristle at each rounded angles of the apical third; 7th sternite (fig. 4) without any granules, apical margin gently and shallowly tri-emarginate, weakly protuberant at about each lateral third and faintly depressed before the median emargination, which is a little broader than each lateral one, each protuberance with a pair of bristles (inner one shorter than the other) at tip and several short soft setae inside the bristles, lateral sides substraight, with 2 bristles (including the lateral bristle) at about each apical third; 8th sternite (fig. 4) provided with a pair of broad and semioval processes at apex, and deeply, excised medianly, the processes each with a bristle at tip, the excision narrowed in basal half and surrounded with a U-shaped furrow, lateral sides somewhat sinuate, and hind angles subrectangular, weakly produced and each with a bristle.

Femora finely and sparsely punctate with short, fine and sparse pubescence; tibiae bearing very conspicuous, long, thick and stout spines but without short ones; protarsi (fig. 6) narrow, not dilated, nearly a half as broad as the tibiae and no long pubescence dorsally except a few short one.

Male genitalia (figs. 1–3) almost symmetrical; penis oblong-oval, subtriangularly protuberant at apex, well chitinized ventrally but broadly membranous dorsally, separated from parameres in apical half and sticking a part of forked inner appendages out of apical orifice; parameres thin, weakly narrowed distally and slightly tumid in apical portion, slightly produced beyond penis, very finely and deeply cleft medianly near base and hooked dorsally at the apical portion in lateral view.

Female unknown.

Holotype: ♂, Mt. Kojin, Nara Pref., Japan, 16. VIII. 1965, T. ITO leg. (in T. SHIBATA coll.). Paratype: 1♂, same locality as holotype, 17. VIII. 1965, T. ITO leg.; 1♂, Akazai Valley, Hyogo Pref., Japan, 22. VII. 1979, T. ITO leg.

The present new species is easily distinguishable from all the other *Latotachinus*-species in having the distinct lateral bristles of abdomen, the 7th abdominal sternite without any granules, and it is much more closely related to *T. javanus* CAMERON (sensu in lit. ULLRICH 1975) from Java and Darjeeling by similar structure of the male genitalia, the antennae and the abdominal 7th sternite and 8th segment, but is easily distinguished from *javanus* by the following points: in the new species the body larger, the lateral bristles of abdomen well developed, distinctly observable on 4th to 7th segments and the 7th abdominal sternite without any granules, while in *javanus* the body smaller (3.3–3.6 mm), the lateral bristles ill-developed, short ones observable only on the 6th abdominal segment, and the 7th abdominal sternite with sparing but distinct granules on the depression before the median emargination.

Tachinus (*Latotachinus*) *insularis* sp. nov. (Figs. 8–15)

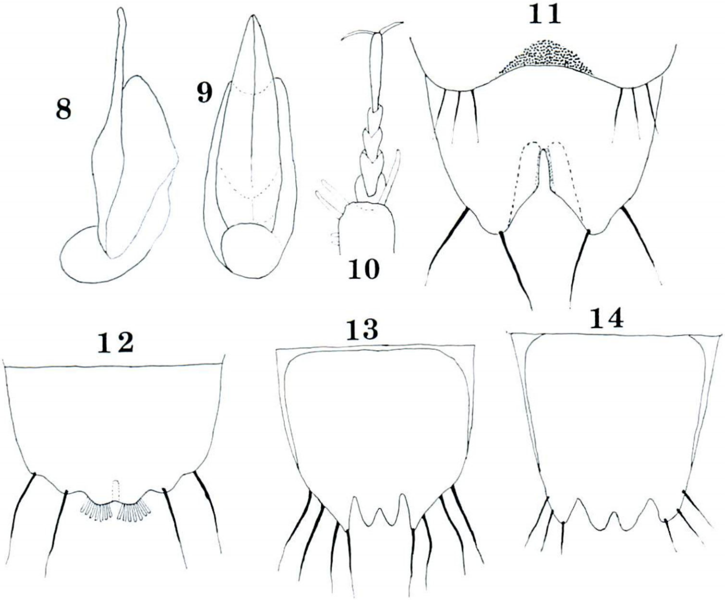
Body gently narrowed behind, well convex and strongly shining above; black, clypeus dull yellow, mouth organs pale brownish yellow except pitchy mandibles, antennae dark reddish brown with a little paler basal 2 segments, pronotal sides and base, elytral sides and each apex of abdominal segments narrowly reddish, and legs dark reddish brown with protarsi brownish yellow. Length: 6.6–7.2 mm.

♂: Head two-fifths as broad as pronotum, very minutely and sparsely punctate, without visible microsculpture, almost glabrous but clypeus with fine and several soft hairs only on extreme lateral sides; clypeofrontal suture fine and weak. Eyes small, not prominent and much shorter than postgenae (about 1 : 2), postgenae weakly arcuate and gently narrowed behind. Antennae stout, rather long, fully beyond shoulders and somewhat thickened distally from 2nd to 9th segments; basal 4 segments polished, basal 3 and 11th segments fairly but 4th and 10th slightly longer than broad, 5th and 6th a little broader than long, 7th to 9th nearly as long as broad, and each segment with relative length as follows: 11<-6-10-7-6-8-9-10-10-10-14. Mentum and submentum finely and very sparsely punctate, without any microsculpture; gular plate rather broad, subparallel-sided, somewhat evenly convex and without punctures or microsculpture, and gular sutures strongly impressed.

Pronotum fairly broader than long (3 : 2), nearly as broad as and a little shorter than elytra (about 4 : 5); sides gently rounded and more narrowed in front from basal fourth than behind; apical margin weakly arcuate but a little produced in front at broadly rounded apical angles, basal margin weakly arcuate behind but very shallowly emarginate laterally to fully rounded basal angles; disc impunctate, not microsculptured anywhere, with median line fine, vague and lying from apical third to basal fourth.

Elytra subparallel-sided, broader than long (6 : 5), lateral sides substraight and with a few denticles on humeral portion, apical margin weakly rounded individually, latero-apical angles obtusely angulate, inner apical angles subrectangular but narrowly rounded; disc finely and very sparsely punctate, with short, fine and sparing pubescence and without any microsculpture.

Abdomen fairly narrowed behind, devoid of lateral bristle and microsculpture (in the preceding species the lateral bristle present) with similar punctures as in the preceding species but much denser except on



Figs. 8–14: *Tachinus insularis* sp. nov.

8. ♂ genitalia, lateral view; 9. ditto, ventral view; 10. ♂ protarsi; 11. ♂ 7th and 8th sternites; 12. ♀ 8th sternite; 13. ♀ 8th tergite; 14. ♂ 8th tergite.

3rd tergite and 8th segment, and almost evanescent in apical third of 7th tergite, the punctures on under side coarser, more irregular and rather sparser than on upper side; 8th tergite (fig. 14) quadri-lobed at apex, the lobes rather short, and rounded at each tip, lateral lobes of them a little longer than the inner ones, with 3 equidistant long setae on the lateral margin and with the apex produced a little beyond level of extreme base of median emargination; 7th sternite (fig. 11) broadly and shallowly emarginate in middle of apex, then gently arcuate laterally to rounded apical angles, subtriangularly and weakly depressed before the median emargination, very densely granulated on the depression and provided with 3 fine bristles on each lateral side of the emargination; 8th sternite (fig. 11) broadly bilobed at apex, very deeply and narrowly excised medianly, broadly and deeply furrowed along the median excision except the extreme base, the lobes not long, rapidly narrowed toward each rounded apex, the apex bearing a pair of bristles.

Legs strongly spinous, the spines irregular-sized; femora coarsely and rather closely punctate with fine pubescence; protarsi (fig. 10) narrow, a half as broad as apex of the protibiae and dorsally covered with distinct, long and sparing pubescence.

Male genitalia (figs. 8, 9) somewhat asymmetrical; penis suboblong, rounded at base but broadly emarginate at apex, well chitinized ventrally but broadly membranous and depressed dorsally; parameres subcuneiform owing to both lobes merged in a plate, adhered to penis in basal two-thirds, a little narrower than penis throughout, gently convergent from basal fourth toward subacute apex, in lateral view distinctly tumid in about basal third but thin in apical half and fully beyond penis.

♀: 8th tergite of abdomen (fig. 13) quadri-lobed at apex, the outer lobes produced a little beyond the

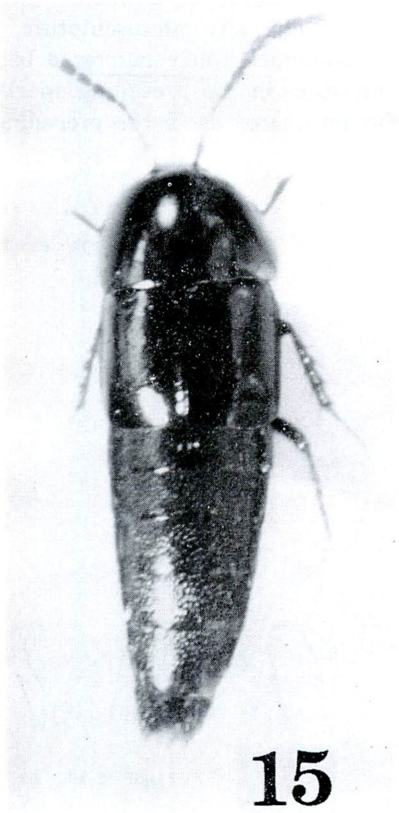


Fig. 15. *Tachinus insularis* sp. nov

inner ones and bearing 4 bristles on each outer margin from subacute apex to base, outer emarginations moderate in depth but much deeper than the median one; 7th sternite simple; 8th sternite (fig. 12) hexamerous-lobed, the lobes very short and gently rounded, the innermost two lobes with several soft setae at each tip and the others each with a bristle.

Holotype: ♂ and allotype: ♀, Mt. Yangming, Taipei Hsien, Taiwan, 2. V. 1983, N. Ito leg. (in T. Shibata coll.).

The present new species closely resembles *T. punctiventris* Sharp from Japan in general appearance, but differs from the latter as the followings: in the new species the abdomen very densely punctate, the antennae reaching shoulder, the eyes very small and the male genitalia with parameres produced much more beyond the penis, while in *T. punctiventris* the abdomen rather sparsely punctate, the antennae very long and fully beyond middle of the elytra, the eyes larger, nearly as long as the postgenae and the parameres of male genitalia much shorter, only a little beyond the penis.

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Three New Species of the Genus *Coleolissus* (Harpalini) from Southeast Asia, with the Subgeneric Note (Coleoptera, Carabidae)

By NOBORU ITO

In this paper I am going to propose to treat genus *Tenuistilus* as subgenus of *Coleolissus* and to describe three new species belonging to the subgenus.

I would like to dedicate this small paper to Mr. TAICHI SHIBATA, heartily celebrating his 61st birthday, with my deep gratitude for his continuous guidance over many years and kind offer of materials. I wish to express my sincere thanks to the members of the Osaka Coleopterological Society for their contribution of valuable materials and their efforts to complete the supplement.

Subgenus *Tenuistilus* stat. nov.

Tenuistilus HABU, 1978, Proc. Japan Soc. Syst. Zool., No. 15 : 51–55. (Type-species : *T. teradai* HABU).

The different points between genus *Tenuistilus* and *Coleolissus* are based on features of the elytra and the styluses as the following key, but in my examined species the styluses is structurally similar to those of *Coleolissus*, so that I would like to treat *Tenuistilus* as subgenus of *Coleolissus*.

Key to subgenera of genus *Coleolissus*

1 (2) The 3rd interval of elytra with only one setiferous pore·· Subgen. *Neolissus* LANDIN
2 (1) The 3rd interval with several setiferous pores·······································(3)
3 (4) Elytra dentate at apex ; apical segment of styluses moderate in length and curved outwardly, with a foramen before apex··············Subgen. *Coleolissus* BATES
4 (3) Elytra edentate and rounded at apex ; apical segment of styluses structurally near to those of *Coleolissus*, or when the apical segment substraight and distinctly elongate, the foramen more approaching to the apex ······Subgen. *Tenuistilus* HABU

Coleolissus (*Tenuistilus*) *shibatai* sp. nov.

Body elongate, black, shiny, elytra with a clearly iridescent lustre

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and slightly aeneous tinge, which on pronotum much fainter, buccal parts dark reddish brown, lateral areas of pronotum, lateral borders of elytra, and legs yellowish brown.

Head rather convex, wholly impunctate, or sometimes sparsely and minutely punctate on frons; labrum subrectangular, clypeus hardly emarginate apically, obscurely rugose near each setiferous pore which situated a little apart from clypeo-apical corner, frontal suture fine, frontal impression running obliquely backward from each apex of the suture, moderately deep but gradually reduced to near eye, supraorbital seta situated before apparent hind level of eye, eyes rather convex and three times as long as postgenae, postgenae somewhat developed and gently convergent to neck-constriction, antennae slender, reaching basal fifth of elytra, 3rd joint as long as 4th, and pubescent in apical half; genuine ventral margins of eyes a little separated from buccal fissures, mandibles relatively robust, a little produced forward and gently curved, sharpened apically, maxillary palpi fairly long, 4th joint very sparsely pubescent, slightly longer than 3rd, labial palpi slender, 3rd as long as 2nd, ligula narrow, weakly wedge-shaped, bisetose and truncate at apex, paraglossae linearly and weakly widened, almost adnate with ligula and produced forward beyond it, mentum with a median tooth sharp and transverse-triangular, epilobes triangular and relatively large; microsculpture isodiametric along apex of clypeus, faint and transverse near frontal impressions.

Pronotum moderately convex, transverse, a half wider than long, nearly 1.7 times as wide as head, the widest point at middle, from which sides somewhat arcuately narrowed in front and substraightly behind, margins of whole sides clearly bordered, apex slightly and deeply emarginate, the emargination apparently substraight on the bottom, base hardly bisinuate, wider than apex (1.3 : 1.0), apical angles narrowly rounded, basal ones widely rounded, front and hind transverse impressions very weak and obscure, median line extremely fine, reduced near apex and base, lateral furrows gradually widened behind from apical two-fifths and falling into ill-defined basal foveae, space between the fovea and lateral side slightly convex, a marginal seta situated at apical two-fifths and relatively separated from side; disc largely impunctate, moderately punctate on lateral furrows and basal area, the basal punctures minuter and sparser medianly, denser and a little coarser in the foveae; microsculpture invisible in 80 magnification.

Winged. Elytra oblong, 1.4 times as wide as pronotum, flattened on major part, sides subparallel, somewhat strongly arcuate before indistinct apical sinuses, base shallowly emarginate, with obtuse and blunt humeral angles, apex separately rounded, striae shallow but clear, intervals almost flattened, rather convex apico- and baso-laterally, very sparsely and minutely punctate, 3rd interval with a row of eight or nine setiferous pores along 2nd stria, scutellar strioles rather long, marginal series interrupted medianly, (11–13)+(14–15); microsculpture invisible.

Ventral side impunctate except very sparsely punctate on mesepisterna and laterally on metasternum, sparsely ciliate medianly on pro- and metasterna and 2nd to 6th abdominal segments, prosternum weakly rugose apically, flattened along middle and bi- or trisetose at apex of its process, metepisternum relatively longer than wide (1.8 : 1.0), outer margin of 6th abdominal segment wholly bordered, in ♂ truncate or hardly arcuate and in ♀ widely rounded between both slight subapical sinuses, with four setae in both sexes, the setae equidistant from each other, in which apical two somewhat apart from apical margin.

Fore tibiae not sulcate dorsally, bearing a series of four or five short setae, terminal spur simple, fore femora without cilia, 1st joint of mid-tarsi in ♂ apically with adhesive hairs, hind tarsi 1.2 times as long as the width of head, 1st equal in length to the following two joints together, 2nd nearly as long as 3rd, all claw-joints trisetose ventrally on each side.

Aedeagus (Fig. 1) more or less thickened, ventral side subrectangularly curved before basal bulb in lateral view, then sublinearly produced apically from the curved corner, in ventral view relatively convex, slightly depressed and bordered only at apical part, apex subsclerotized and not reflexed dorsally, apical lamella small, subtransverse and unbordered, left paramere rather large and trapezoidal, right paramere subrectangular, relatively larger than usual and as long as the

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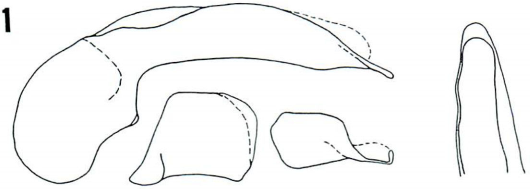

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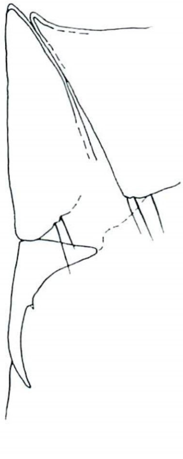

Figs. 1, 2. *Coleolissus* (*Tenuistilus*) *shibatai* sp. nov.
1, Male genitalia. 2, Styluses.

left; basal segment of styluses (Fig. 2) somewhat widely triangular and bisetose subapically, apical segment fairly long, equalling 0.8 times basal one and slender (but less than in *Coleolissus teradai*), gently curved outwardly and sharpened apically by degrees, bearing a long ante-apical seta on inner side and a small spine at middle of outer margin.

Length: 11.0–12.0 mm. Width: 4.2–4.5 mm.

Holotype: ♂, Chipen, Taitung Hsien, Taiwan, 30. IV. 1985, N. ITO leg. (in T. SHIBATA's coll.); paratypes: 4♂♂, 1♀, ditto.

The present species is closely allied to *Coleolissus* (*Tenuistilus*) *teradai* (HABU) stat. nov., but is distinguished from the latter by the following points: the body is larger in size, with the pronotum and elytra slightly aeneously tinged, the apex of pronotum is a little more deeply emarginate, the punctures on elytra are certainly present, and the apical segment of styluses is less slender, more clearly curved and possesses a long seta placed before the apex instead of being almost at the apex.

Coleolissus (*Tenuistilus*) *kiyoyamai* sp. nov.

Body oblong, black to dark brown, shiny, elytra with a somewhat weak iridescent lustre, buccal parts, antennae, lateral borders of pronotum and of elytra, and legs reddish brown, sutural intervals of elytra slightly brownish.

Head rather convex, very sparsely and minutely punctate; labrum subsquare, weakly notched at apex, clypeus almost flat or slightly convex, shallowly emarginate and clearly bordered at apex, frons weakly and finely rugose, but the rugosities near a pair of setiferous pores obscure and rough, frontal suture fine and shallow, incrassate laterally in depth, frontal impressions divergent behind to lateral furrows, moderately deep but becoming shallow to near the furrows, supraorbital seta situated before apparent hind level of eye, (in paratype the frontal suture obscure and a little shallower, the frontal impressions not so deep), eyes large and more or less well convex, postgenae short, not more than 0.2 times as long as eye, hardly tumid and rather steeply convergent to neck-constriction, antennae slender and passing a little beyond base of elytra, 3rd joint not shorter than 4th, pubescent in apical half and somewhat thickened apically; genuine ventral margins of eyes adjoining buccal fissures, mandibles long and slender, gently curved, and pointed at apex (in paratype the apex somewhat blunt), maxillary palpi relatively slender, 4th joint as long as 3rd, and hardly pubescent, labial palpi fusoid, 3rd a little shorter than 2nd, ligula feebly widened apically, subarcuate and bisetose at apex, paraglossae subadnate with ligula, narrow and produced forward across it, mentum distinctly but not pointedly toothed at apical sinus, epilobes moderate in size and narrowly triangular; microsculpture relatively distinct, consisting of isodiametric or subtransverse meshes, which clearer in ♀ than in ♂.

Pronotum moderately convex, transverse, a half wider than long, entirely bordered on each margin; sides regularly arcuate in front and sublinearly narrowed behind from apical two-fifths, apex shallowly emarginate, base as long as apex, truncate or somewhat arcuate, apical angles narrowly rounded, basal ones obtuse, subangulate and barely protuberant at tip, lateral furrows linked with basal foveae, narrow but feebly widened gradually behind from apical two-fifths, basal foveae rounded and not so shallow, dorsal punctures only scattered on the furrows and foveae, more or less coarse, especially coarser medianly on the foveae (in paratype the punctures spread over on base and a little denser), baso-lateral areas weakly reflexed, front transverse impression somewhat deep and rather clear, hind impression very shallow and obscure, median line fine, lying between both impressions, obscurely rugose on each side, marginal seta situated at apical two-fifths on inner side of the furrow; microsculpture of transverse meshes, relatively clearer in ♀ than in ♂.

Winged. Elytra gently convex, oblong-oval, 1.3 times as wide as pronotum; sides sublinearly and feebly widened from humeri to apical two-fifths, then arcuately and somewhat strongly convergent behind and weakly sinuate before apex, humeral angles angularly rounded, base shallowly emarginate, apex separately and widely rounded, striae shallow and somewhat wide, intervals not punctate and slightly convex, more convex near apex and base, 3rd interval with a series of five setiferous pores along 2nd stria, scutellar strioles moderately long, marginal series divided into two groups, front group composed of eight or nine pores, hind group nine to eleven pores; microsculpture invisible in 80 magnification.

Prosternum sparsely ciliate and depressed along middle, obscurely rugose apically, and bisetose at apex of its process, metasternum very weakly coarsened on lateral areas, with a few cilia like on prosternum, metepisternum relatively longer than wide (1.8 : 1.0), similarly coarsened as on metasternum, abdomen sparsely ciliate medianly on 2nd to 6th segments, 6th bisetose on each side in both sexes, its outer marginal border clear, but interrupted or obscure between both subapical sinuses, where in ♂ almost truncate, in ♀ narrowly arcuate and a little more produced than usual.

Fore tibiae not sulcate, with a row of several short setae, terminal spur simple, hind tarsi as long as the width of head, 1st joint equal in length to 2nd and 3rd together, every 5th joint bisetose beneath on each side.

Aedeagus (Fig. 3) more or less slender, slightly twisted to right and sclerotized behind from apical third along dorsal margin, basal bulb with a small protuberance on each margin as in subgenus *Coleolissus*, in front of which ventral side rapidly turned in lateral view, then subarcuately produced toward apex, apex fairly reflexd dorsally, apical lamella large, as long as wide and clearly bordered on outer margin, left paramere subtriangular, widely rounded at outer corner, right paramere subrhomboidal, a little longer than the left; styluses (Fig. 4) similar in form to those of *C. teradai,* basal segment narrowly triangular and bearing a short seta before the apex, apical segment fairly slender but not so long as in *C. teradai,* very weakly curved on outer margin, foramen closely situated apically, with a long seta.

Length: 7.0-9.5 mm. Width: 3.0-3.5 mm.

Holotype: ♂, Maxwell's Hill, Malaysia, 30. III. 1978, Y. KIYOYAMA leg. (in T. SHIBATA's coll.); paratype: ♀, ditto.

The present species is similar to *Coleolissus teradai* (HABU) but differs from the

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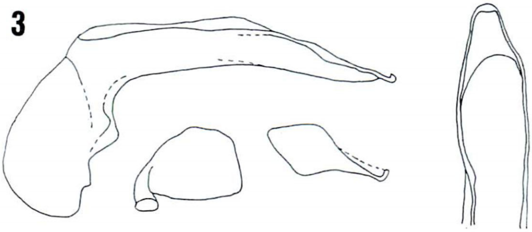

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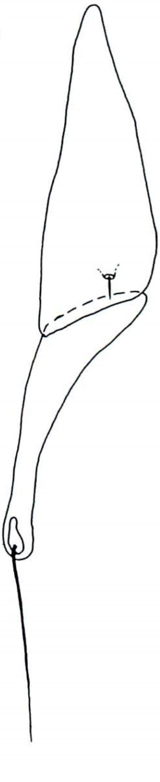

Figs. 3, 4. *Coleolissus* (*Tenuistilus*) *kiyoyamai* sp. nov.
3, Male genitalia. 4, Styluses.

latter in having the head a little more distinctly microsculptured, the pronotum more sparsely punctate, with basal angles not rounded, and the aedeagus possessing a small protuberance on each margin of the basal bulb.

Coleolissus (*Tenuistilus*) *nigricans* sp. nov.

Body oblong, shiny, pitchy black, with a faint iridescent lustre on elytra and on pronotum, antennae, buccal parts and legs reddish brown.

Head gently convex, very sparsely and minutely punctate; labrum subsquare, straight or shallowly emarginate at apex, clypeus somewhat thick, substraight apically, with microsculpture visible only near apex, distinct and consisting of transverse meshes, frons weakly and finely rugose, clearly bounded from clypeus by frontal suture, microsculpture of fine transverse lines, obscurer than on clypeus, frontal impressions reached to lateral furrows and well marked throughout, eyes large and well convex, inter-ocular space relatively wide, equalling four times the width of eye, postgenae short, at most one-fourth times as long as eye and curving rather sharply to neck-constriction, antennae slender, extending a little beyond base of elytra, 2nd joint twice as long as 3rd, 4th subequal in length to 3rd, supraorbital seta situated before apparent hind level of eye; genuine ventral margins of eyes almost reached to buccal fissures, mandibles robust, more or less produced forward, and pointed at apex, maxillary palpi somewhat slender, 4th joint as long as 3rd, nearly glabrous, labial palpi fusiform, rather thick, 3rd sparsely setose, and a little shorter than 2nd, ligula somewhat wide, straight and bisetose at apex, paraglossae not widened apically, produced forward beyond ligula, median tooth of mentum distinct and narrowly equilateral-triangular, but blunt at tip, epilobes narrow and not large.

Pronotum moderately convex, transverse, 1.3 times as wide as head, impunctate except for lateral furrows with several coarse punctures ante-medianly; sides fairly rounded in front and subarcuately contracted behind from a little before middle, apex shallowly emarginate, base feebly bisinuate, with border interrupted at middle, basal angles obtuse, blunt at tip, lateral furrows evidently impressed, widened gradually behind from apical two-fifths and fallen into basal foveae, basal foveae not so large, ill-defined and apparently like the extension of the furrows, baso-lateral areas relatively well reflexed, marginal seta situated at apical two-fifths on inner side of the furrow, both front and hind transverse impressions so feeble as to be hardly visible, median line fine, reduced near apex and base, smooth or very obscurely rugose on each side; microsculpture very faint and consisting of transverse lines, but only present partly.

Winged. Elytra weakly convex, oblong, three-fifths longer than wide and 1.3 times as wide as pronotum ; sides subparallel, but rather strongly arcuate behind from apical two-fifths, somewhat deeply sinuate before apex, base shallowly emarginate, with humeral angles obtuse and angulate, apex edentate, but very narrowly rounded and relatively prominent, striae moderately deep and clear, intervals slightly convex, much more convex near apex, especially 8th interval subcarinate apically, 3rd with a series of five or six setiferous pores along 2nd stria, scutellar strioles moderately long, marginal series interrupted medianly, 10+12 ; microsculpture invisible.

Ventral side almost impunctate, but mesosternum and lateral areas of metasternum very sparsely and obscurely punctate, prosternum sparsely ciliate medianly, its process unbordered, with some short setae along margin, metepisternum a little more than one and half times as long as wide, abdominal segments very sparsely ciliate along middle, but the cilia on 6th segment a little denser, 6th clearly and completely bordered on outer margin, in both sexes bisetose on each side and also gently arcuate between subapical sinuses.

Tibiae clearly sulcate, with several short setae along the sulcus, hind tarsi as long as the width of head, 1st joint equal in length to 2nd and 3rd, or 4th and 5th together, all claw-joints bisetose ventrally on each side.

Aedeagus (Fig. 5) relatively slender, with large basal part, in lateral view ventral side sublinearly produced apically from turning point before basal bulb, and dorsal side weakly arcuate, distinctly, widely sinuate before middle, apex reflexed dorsally and sclerotized, the sclerosis

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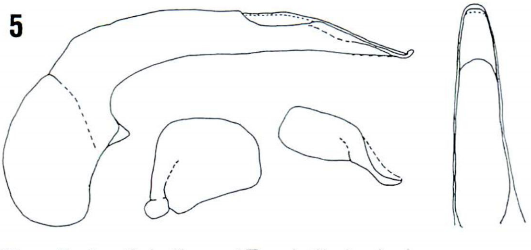

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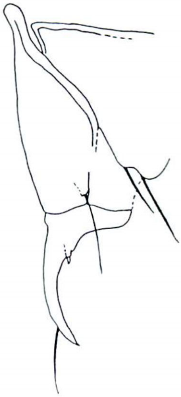

Figs. 5, 6. *Coleolissus* (*Tenuistilus*) *nigricans* sp. nov. 6, Male genitalia. 7, Styluses.

extending to apical one-seventh along dorsal margin, apical lamella large, elongate-subtriangular, half longer than wide, clearly bordered on outer margin, left paramere trapezoidal, blunt at each corner, right paramere oblong, as long as the left; basal segment of styluses (Fig. 6) narrowly trapezoidal, with a long seta situated at apical outer corner, apical segment slender, moderately arcuate outwardly, and pointed at apex, with a long seta before apex and a small spine behind middle on outer margin.

Length: 10.5 mm. Width: 4.2 mm.

Holotype: ♂, Gap, Malaysia, 26. III. 1974, Y. KIYOYAMA leg. (in T. SHIBATA's coll.); paratype: ♀, Cameron Hi., Tanah Rata, Malaysia, 7. IV. 1974, Y. KIYOYAMA leg.

According to the original ANDREWES's description, the present species resembles *Coleolissus* (*Coleolissus*) *noeli* ANDREWES, from which it is distinguished by the edentate elytral apex and the presence of punctures on the head. Also the present species is similar to *C. iris* ANDREWES (or *andrewesi* ALLUAUD), but differs in having the elytra and the disc of pronotum quite impunctate and the dorsal iridescent lustre much fainter than in *C. iris*.

Two New Species of the Genus *Mordellochroa* from Taiwan (Col., Mordellidae)

By YOSHIMI KIYOYAMA

In this paper two new species, *Mordellochroa shibatai* and *M. taiwana*, are described.

To Mr. TAICHI SHIBATA I dedicate this small paper in commemoration of his 61st birthday, with my hearty thanks. He has guided me in taxonomic study and various ways.

I am indebted to the members of the Osaka Coleopterological Society, who have given me invaluable assistances in preparing this paper.

Mordellochroa shibatai sp. nov. (Fig. 1a-g)

♂. Body black, pronotum reddish brown, with a large ill-defined dark patch at the centre, clypeus, mouth parts (maxillary palpi dark brown or yellowish brown), pro- and mesosterna, front femora, and hind tarsi partially also reddish brown, pygidium, anal sternite, terminal spurs of hind tibiae and claws yellowish brown; pubescence principally fuscous with a violescent tinge, but on the following areas — base of pronotum, metasternum, pygidium, anal sternite, base of 1st sternite of abdomen, femora, and sometimes metepisterna — fulvous with a yellowish lustre.

Head (fig. 1a) almost as long as the width inclusive of eyes, moderately convex above, minutely and densely punctate, occipital margin substraight, neither emarginate nor lobed medianly, tempora very narrow, temporal angles rounded off, eyes rather large, quadrate-oval, weakly convex laterally, finely facetted and pubescent. Antennae (fig. 1b) relatively long, nearly 1.7 times as long as the width of head, 1st and 2nd joints cylindrical, 3rd obconical, 4th to 10th somewhat serrate, scarcely decreasing distally in size, 4th distinctly wider and half longer than 3rd, and 1.7 times as long as wide, 11th elongate, longest, one-third longer than 10th, and almost 2.3 times as long as wide. Terminal joint of maxillary palpi (fig. 1d) boat-shaped as in *M. yanoi,*

〔Ent. Rev. Japan, Vol. XLII, Suppl., pp. 31-36, Dec., 1987〕

but much thicker basally, with apex deeply hollowed.

Pronotum as long as wide, lateral sides gently arcuate (but substraight in lateral view) and rather strongly convergent towards apex from base, apical side well protrudent forward medianly as in *M. yanoi*, apical angles obtuse and quite rounded, basal angles also obtuse and more or less widely rounded; disc moderately convex, but very steeply declining down in latero-apical areas, dorsal sculpture file-like, consisting of fine and somewhat dense punctures. Scutellum triangular, rounded at apex.

Elytra nearly 2.8 times as long as wide, subparallel to apical fifth at sides, then gradually attenuate backward, separately and moderately rounded at apex; sculpture as on pronotum, but distincter and denser. Pygidium long and slender, much more than 3 times as long as anal sternite (3.8 : 1.0), feebly curved downward or substraight in lateral view.

Underside similarly sculptured like on elytra, sculpture on metasternum becoming vaguer and denser medianly, anal sternite gently rounded at apex; front and middle trochanters each with a black bristle, front

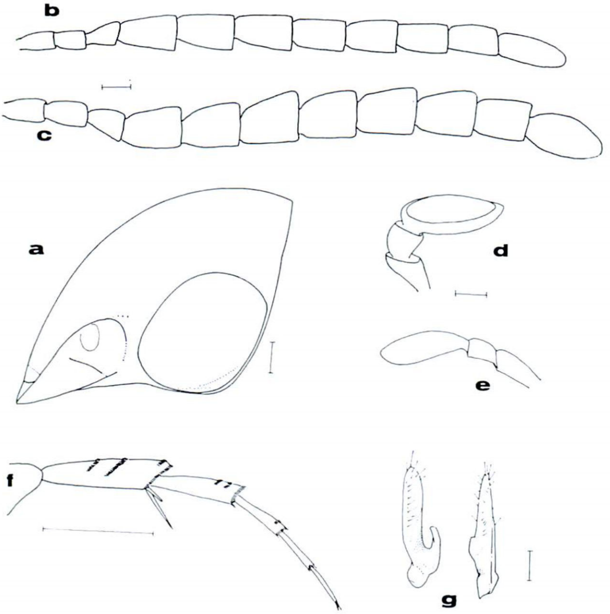

Fig. 1. *Mordellochroa shibatai* sp. nov.

a. head, ♂. b. left antenna, ♂. c. right antenna, ♀. d. left maxillary palpus, ♂. e. right maxillary palpus, ♀. f. left hind leg, ♂. g. parameres of genitalia, ♂. (Scales: a–e, g, 0.1 mm.; f. 1.0 mm.)

femora also with a black bristle at basal third of inner side, front tibiae robust, bent down a little, and dorso-basally with a batch of black tomentum, front tarsal joints slender and parallel-sided, of which basal two joints a little stouter, with thin black bristles along inner side, the bristles of the 1st joint eight, of the 2nd two or three in number, 4th joint of front and of middle tarsi truncate and simple at apex. Lateral ridges of hind legs (fig. 1f) moderately oblique, 3; 2, 1, 0; hind tibiae with the 3rd ridge situated before middle, extended to near median axis, the 2nd one behind middle, longest and crossing a little beyond the median axis, the 1st one short, occupying one-third of the tibial width. Inner terminal spur of hind tibiae a little more than twice as long as the outer one, reaching apical two-fifths of the first tarsal joint.

Parameres of genitalia (fig. 1g) similar to *M. yanoi* in shape and structure as shown in figure, but right paramere convex basally, a ventral branch thin and curved inward, left paramere not sinuate behind a small ventral branch.

♀. Body thicker, front femora black, pubescence on reddish area of pronotum and on hind tibiae fulvous with a yellowish lustre. Antennae (fig. 1c) much wider and more serrate, 4th to 9th joints of equal length, 10th a little shorter than 9th, but 6th slightly longer than wide, from which decreasing gradually in width to 4th or to 10th, 4th nearly 1.4 times as long as wide and a little wider than 10th, 11th twice as long as wide and more clearly rounded at inner side. Terminal joint of maxillary palpi (fig. 1e) usually fusiform, a little more than 3 times as long as the preceding joint. Elytra a little wider, sides subparallel to apical eighth, then separately and more widely rounded apically. Front legs and middle trochanters without any bristles or tomenta, front tibiae less robust, straight, the corresponding tarsi linearly slender. Pygidium missing mostly.

Body length: 3.8-4.6 mm. (♂), 4.8 mm. (♀) (excl. head and pygidium).

Holotype: ♂, Ssuleng, Taoyuan Hsien, 14. V. 1983, H. MIYATA leg. (in coll. T. SHIBATA). Paratypes: 1♂, the same data of holotype; 1♂, 1♀, Nanshanchi, Nantou Hsien, 10. IV. 1973, S. TAKEDA leg. and V. 1980, LUO JINJI leg. (through Mr. H. ARIMOTO).

The present species is closely related to *M. yanoi* (NOMURA) from Taiwan, but can be distinguished from the latter by the following points: The hind coxae black as well as the legs (though the front femora in ♂ reddish brown). The pronotum with a large dark patch at the centre. The occipital margin of head substraight, instead of being lobed medianly. The 3rd ridge of hind tibiae situated in the basal half, and the 2nd one much longer, but in *M. yanoi* all the ridges of hind tibiae situated in the apical half and far apart from the tibial base, and not reaching the median axis.

Mordellochroa yanoi (NOMURA, 1951)

Mordellistena yanoi NOMURA, 1951, Tôhô-Gakuhô, 1: 56.
Mordellochroa yanoi: NOMURA, 1967, Ent. Rev. Japan, 19 (1): 33.
Examined materials: 1♂, 1♀, Nanshanchi, Nantou Hsien, V. 1980, LUO JINJI leg.

Mordellochroa taiwana sp. nov. (Fig. 2a-g)

♂. Body light yellowish brown, elytra, basal four sternites of abdomen (except median parts of 1st and 2nd sternites), setae and ridges of hind legs black, antennae (except basal three joints) and terminal joint of maxillary palpi dark brown, each elytron with a yellowish basal spot, which ill-defined, round or oblong in shape, occupying about one-fifth of elytral length, and touching neither lateral nor sutural sides; pubescence on median area of pronotum and on elytra fuscous with a violescent tinge as well as on basal four sternites of abdomen, pubescence on the rest (also 1st sternite of abdomen along base) fulvous with a yellowish lustre.

Head (fig. 2a) almost as long as the width inclusive of eyes, somewhat excessively convex, imperceptibly minutely punctate, occipital margin slightly but clearly lobed medianly, tempora very narrow, temporal angles rounded off, eyes relatively small, short-oval, not emarginate in front, slightly convex laterally, finely facetted and finely pubescent. Antennae (fig. 2b) with 1st and 2nd joints cylindrical, 3rd obconical, equal in length to 2nd and a little smaller than 4th, from which to 9th (10th and 11th missing) compactly articulated to each other and very weakly serrate, every joint subquadrate and a little longer than wide (1.2-1.3: 1.0), 5th slightly wider than the others. Terminal joint of maxillary palpi (fig. 2d) hammer-shaped, weakly curved inward.

Pronotum almost as wide as long (1.04: 1.0), subtrapezoidal, lateral sides weakly arcuate-narrowed to apex from before basal angles, or substraight in lateral view, apical side well protrudent forward medianly as a rule, apical and basal angles obtuse (120°) and widely rounded; disc moderately convex, somewhat steeply declining down in latero-apical areas (the declivity less than that of *M. yanoi*), finely and sparsely punctate, therefore the punctures not arranged as a file-like sculpture. Scutellum triangular, rounded at apex.

Elytra nearly 2.5 times as long as wide, sides subparallel and gradually narrowed from apical third to separately and moderately rounded apex; surface finely but distinctly punctate, the punctures a little denser than those on pronotum and forming slightly a file-like sculpture. Pygidium very long and slender, nearly 5 times as long as

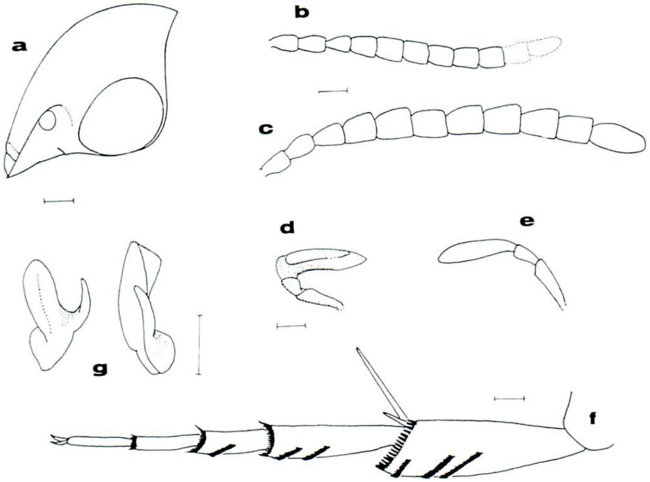

Fig. 2. *Mordellochroa taiwana* sp. nov.
a. head, ♂. b. left antenna, ♂. c. right antenna, ♀. d. left maxillary palpus, ♂. e. right maxillary palpus, ♀. f. left hind leg, ♂. g. parameres of genitalia, ♂. (Scales : 0.1 mm.)

anal sternite, straight in lateral view.

Underside sculptured like on elytra, but on metasternum more vaguely and densely so, anal sternite gently rounded at apex ; front legs without any bristles as secondary sexual feature, front tibiae straight and not robust, front tarsi of slender joints, regularly parallel-sided, the 1st joint distinctly shorter than the succeeding three joints together, the 4th shortest, with apex quite alike that of middle tarsi, truncate and simple. Lateral ridges of hind legs (fig. 2f) moderately oblique, 3 : 2, 1, 0 ; all ridges of hind tibiae situated in apical half, the 3rd ridge longest, extended to near median axis, and a little longer than the 2nd ridge, the 1st one at most half the length of 2nd. Inner terminal spur of hind tibiae nearly 3.2 times as long as the outer one, and two-thirds the length of the 1st tarsal joint.

Parameres of genitalia (fig. 2g) small in size, right paramere as in *M. yanoi* or *M. shibatai,* but obviously shortened, left paramere without a ventral branch, only with an additional basal process, if the left one possesses a ventral branch, both the parameres recalled those of *M. freyi* (from Europe).

♀. Body a little larger and thicker. Antennae (fig. 2c) longer and a little wider, nearly 1.6 times as long as the width of head, 4th to 10th joints more clearly serrate, 10th smaller than the others, 11th oblong-oval, almost twice as long as wide, and 1.7 times the length of 10th. Terminal joint of maxillary palpi (fig. 2e) fusiform as usual. Elytra 2.3 times as long as wide, with sides very weakly narrowed in front and behind from the middle. Anal sternite distinctly notched at apex.

Body length: 2.9 mm. (♂), 3.4 mm. (♀). (excl. head and pygidium).

Holotype: ♂, Nanshanchi, Nantou Hsien, V. 1980, LUO JINJI leg. (in coll. T. SHIBATA). Paratypes: 1♂, Roshan, Nantou Hsien, 5. V. 1971, Y. HAYASHI leg.; 1♀, Chinshan, Hualien Hsien, 22. V. 1972, Y. KIYOYAMA leg.

The present species is easily separated from the other species of the genus from Taiwan and Japan by the smaller body with the peculiar coloration, the quite dissimilar parameres of the male genitalia in shape, the absence of any secondary sexual features of front legs in the male.

Saving for the generic features, the present species is very similar in general appearance to *Tolidostena atripennis* NAKANE from Japan, but differs from it by the three ridges of hind tibiae instead of being two, and the presence of basal spot of each elytron.

A Study of the Japanese Lagriidae

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Abstract A revision of the Japanese Lagriidae is presented. The genus *Arthromacra* is transferred from the tribe Lagriini to the tribe Statirini. *Macrolagria shibatai* is newly described. *Lagria okinawana* (M.T. CHÛJÔ) is newly combined and raised to specific rank, and *Macrolagria robusticeps* (LEWIS) is also newly combined. *Lagria uervex* MARSEUL is created a synonym of *L. rufipennis* MARSEUL ; *Arthromacra viridissima* LEWIS, *A. sumptuosa* LEWIS, *A. higoniae* LEWIS, and *A. apicalis* KÔNO are created synonyms of *A. decora* (MARSEUL). Lectotypes are designated for *Lagria rufipennis* MARSEUL, and *Casnonidea occipitalis* (BORCHMANN).

A history of major research on Japanese Lagriidae, keys to the tribes, genera and species, and photographs and illustrations of some diagnostic characteristics of all species are given.

Introduction

Lagriidae are elongate beetles which may be distinguished from the Tenebrionidae by the dilated penultimate tarsal segment, the more prominent procoxae, and the apical antennal segment which is usually greatly lengthened. WATT (1974) proposed that the traditional Lagriidae should be sunk to the tribal rank, Lagriini, in the subfamily Lagriinae and this treatment seems to be generally accepted by most coleopterists.

Nineteen species of the traditional family Lagriidae are hitherto known from Japan and its adjacent regions. Some of them are very familiar to us, while others are not. Even if they were originally described from Japan, we have not correctly recognized them until today. I have queried that there are many species originally described from Japan due to their differences in coloration, punctation, rugosity, body length, and so on. We have followed BORCHMANN's work for a long time, but I have questioned his treatment, e.g. he regarded the genus *Arthromacra* KIRBY, as a member of the subfamily Lagriinae, and he thought *Lagria notabilis* LEWIS a species of *Cerogria*, and also *Eutrapela robusticeps* LEWIS a species of *Arthromacra*. Thus, I have started this study of Japanese Lagriidae.

Fortunately, through the courtesy of Dr. YOSHIHIKO KUROSAWA, former chief of Zoology in the National Science Museum (Nat. Hist.), Tokyo, I have had the

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〔Ent. Rev. Japan, Vol. XLII, Suppl., pp. 37-60, Dec., 1987〕

opportunity of examining all the lagriid-beetles preserved in the collection of the Museum. I was very lucky to have the chance to receive advice on Lagriidae from Dr. OTTÓ MERKL, Természettudományi Múzeum, Budapest, so that I have been able to progress with this study very efficiently. I have been supported by constant advice concerning Japanese Lagriidae from Prof. Dr. HIROYUKI SASAJI, Fukui University. Dr. CLAUDE GIRARD, Muséum National d'Histoire Naturelle, Paris, Mr. LES JESSOP, British Museum (Nat. Hist.), London, Dr. LOTHAR ZERCHE, Akademie der Landwirtschaftswissenschaften der Deutschen Demokratischen Republik, Institut für Pflanzenschutzforschung, Eberswalde, Prof. MASATAKA SATÔ, Nagoya Woman's University, and Dr. MASAAKI SUWA, Hokkaido University, have permitted me to examine the type specimens preserved in their Museums and Laboratories.

A large number of specimens from various areas of Japan and also many references concerning Japanese Lagriidae have been contributed by the following persons: Dr. KATSURA MORIMOTO and Mr. MICHITAKA CHÛJÔ, Kyushu University, Dr. MUTSUO MIYATAKE, Ehime University, Mr. KÔYÔ AKIYAMA, Yokohama City, Mr. KATSUMI AKITA, Hisai City, Mr. MASATSUGU AMANO, Kitakyushu City, Mr. SHÔICHI IMASAKA, Shimabara City, Mr. YOSHIKAZU MIYAKE, Tama City, Mr. NOBUAKI KOBAYASHI, Kawasaki City, Mr. SHIGEAKI KONDO, Sapporo City, Mr. MASAHIRO ÔHARA, Hokkaido University, and Mr. ISAO OHTSUKA, Kumamoto City.

Messrs. KAORU SAKAI and KÔYÔ AKIYAMA took photographs and drew illustrations for this paper, and Mr. LEE ROGERS kindly read the original manuscript.

I would like to express my sincere thanks to all the persons above who gave me invaluable assistance and cooperation in this study.

This small paper is dedicated to Mr. TAICHI SHIBATA, advisor of the Osaka Coleopterological Society, to celebrate his 61st birthday; I thank him and his colleagues for giving me the opportunity to study specimens collected by them.

The holotype to be designated here is preserved in the collection of the National Science Museum (Nat. Hist.), Tokyo.

Major research on the family Lagriidae of Japan

1. MARSEUL (1876) described four new species from Japan: *Lagria rufipennis*, *L. vervex*, *L. decora*, and *Statyra rufobrunnea*.
2. LEWIS (1879) published a catalogue of Japanese Coleoptera, in which he listed five lagriid-beetles.
3. SCHÖNFELDT (1887) published a catalogue of Coleoptera of Japan and he listed five Japanese Lagriidae. Later in 1897 he added seven species to the Japanese fauna.
4. LEWIS (1895) described four new species, *Eutrapela robusticeps*, *Arthromacra viridissima*, *A. sumptuosa*, *A. higoniae*. He erected a new genus *Macrolagria* and described two new species, *M. fujisana* and *M. hirsuta*. He also stated and figured *Arthromacra decora*.
5. LEWIS (1896) described a new *Macrolagria*, *M. rugipennis*, and also a new *Lagria*, *L. notabilis*, both from Amami-oshima.
6. BORCHMANN (1910) listed Japanese lagriid-beetles in the catalogue.
7. PIC (1914) described a variety of *Anisostira rugipennis*, var. *ferriei*, from Amami-oshima.

8. BORCHMANN (1915) published a monograph of the world Lagriinae, including Japanese species.
9. KÔNO (1929) published a paper reviewing Japanese Lagriidae (including those of Taiwan), and he described a new Japanese species, *Arthromacra apicalis.*
10. BORCHMANN (1936) published a monograph of the world Lagriidae which included the Japanese species.
11. CHÛJÔ (1959) described a new species, *Anisostira elegans* from Okinawa Is., and he recorded three other species from Ryukyu Is.
12. NAKANE (1963 a) described a new species, *Arthromacra amamiana*, from Amami-oshima.
13. NAKANE (1963 b) illustrated 11 known-species: *Lagria nigricollis*, *L. fuscata*, *L. notabilis*, *Arthromacra viridissima*, *A. sumptuosa*, *A. amamiana*, *A. decora*, *A. robusticeps*, *Nemostira hirsuta*, *N. rufobrunnea*, *Anisostira rugipennis*, and he stated two other species, *Arthromacra apicalis* and *A. higoniae.*
14. CHÛJÔ (1970), concerning *Anisostira elegans*, gave descriptions of body coloration and sexual differences.
15. M.T. CHÛJÔ (1985 a) described a new subspecies, *Cerogria* (*Cerogria*) *notabilis okinawana* from Okinawa-hontô, and he regarded *Anisostira elegans* as a synonym of *A. abnormipes* BORCHMANN (a Taiwanese species).
16. M.T. CHÛJÔ (1985 b) illustrated 13 known-species: *Lagria nigricollis*, *Cerogria notabilis*, *Arthromacra viridissima*, *A. amamiana*, *A. sumptuosa*, *A. decora*, *A. robusticeps*, *A. abnormalis*, *Anisostira rugipennis*, *A. abnormipes*, *Casnonidea occipitalis*, *Macrolagria rufobrunnea*, *M. fujisana*, and he stated *Cerogria notabilis okinawana*, *Arthromacra apicalis* and *A. higoniae.*

Key to the tribes and genera of Japanese Lagriidae

1 (2) Fore coxae close together; prosternal process between coxae absent or very small and thin; terminal segments of antennae mostly strongly elongate. Body often broad, with elytra usually not striate but fairly closely punctate and more or less rugose, often rather densely haired. Tribe Lagriini (Subfamily Lagriinae sensu BORCHMANN). ············ Genus *Lagria* FABRICIUS

2 (3) Fore coxae separated by the prosternal process; terminal segments of antennae often strongly elongate. Body mostly slender, with elytra mostly punctate-striate, rarely densely haired. Tribe Statirini (Subfamily Statirinae sensu BORCHMANN).

3 (4) Elytra closely punctate and often transversely rugose, hardly punctate-striate. Dorsal surface metallically shining. ············ Genus *Arthromacra* KIRBY

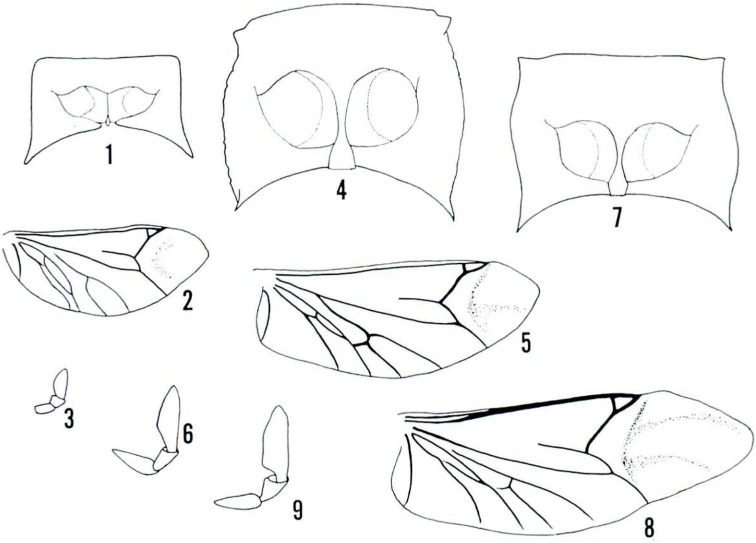
4 (5) Elytra punctate-striate (sometimes coarsely and irregularly punctate). Dorsal surface moderately, not metallically shining.

5 (6) Body rather subparallel-sided; pronotum with four angles (especially fore angles) distinctly angulate. ············ Genus *Macrolagria* LEWIS

6 (7) Fore body more or less narrower than elytra; pronotum with four angles not distinctly angulate.

7 (8) Pronotum punctate; elytra coarsely and irregularly punctate; hind tibiae in males modified. ············ Genus *Anisostira* BORCHMANN

8 (7) Pronotum smooth; elytra regularly punctate-striate; hind tibiae not modified. ············ Genus *Casnonidea* FAIRMAIRE



Figs. 1–9. 1–3. *Lagria rufipennis* Marseul. 4–6. *Arthromacra decora* (Marseul). 7–9. *Macrolagria rufobrunnea* (Marseul). 1, 4, 7. prothorax; 2, 5, 8. hind-wing; 3, 6, 9. maxillary palpus.

Notes. In Borchmann's system, the genus *Arthromacra* Kirby is a member of the subfamily Lagriinae (Lagriini in this paper). Because of the slender and subcylindrical body, the structure of the prothorax, the fusiform terminal segment of the maxillary palpi, the hind wing-venational structure, the genus should belong to the subfamily Statirinae (Statirini in this paper), though more careful and comprehensive higher taxonomic study will be necessary for us to resolve this problem.

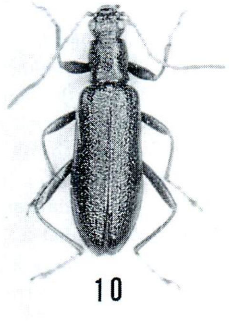
Borchmann (1936) treated *Lagria notabilis* Lewis as a species of the genus *Cerogria*, and M.T. Chûjô (1985 a & b) followed this treatment. Because of the structure of the male antenna, this species is clearly a member of *Lagria*. Also, there is no species of the *Cerogria* found in Japan at the present time.

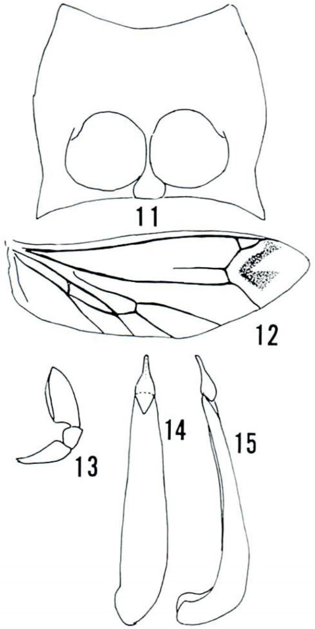
Borchmann (1936) treated *Eutrapela robusticeps* Lewis as a species of the genus *Arthromacra* (*Eutrapela* and *Arthromcra*, both belonged to the subfamily Lagriinae in Borchmann's system). He admitted that *Macrolagria hirsuta* Lewis belonged to Statirinae. The former species has, like the latter, a slender body clothed with long hairs, with the elytra clearly punctate-striate. Therefore, the former should be transferred to the genus *Macrolagria*, Statirinae (Statirini in this paper).

Tribe Lagriini

Genus *Lagria* Fabricius, 1775

Lagria Fabricius, 1775, Syst. ent. I, 2 : 124.
Type species: *Chysomela hirta* Linné, 1758.



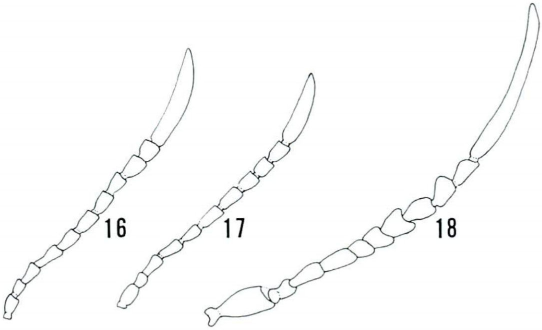


Figs. 10–15. *Arthromacra aenea* (SAY), North America.
10. dorsal view; 11. prothorax; 12. hind-wing; 13. maxillary palpus; 14. male genitalia (dorsal view); 15. ditto (lateral view).

Key to the species of the genus *Lagria*

1 (4) Head and pronotum usually brownish black; elytra yellowish brown to reddish brown. Body smaller (5.5–9.5 mm), less strongly widened posteriorly (rather subparallel-sided in males). Species distributed thoughout Japan and also the Asian Continent.

2 (3) *Male*: Body more subparallel-sided; eyes extremely large, strongly convex laterad and deeply set in the head, with interocular space about 0.3 times the



Figs. 16–18. Male antennae.
16. *Lagria notabilis* LEWIS. 17. *Lagria okinawana* (M.T. CHÛJÔ).
18. *Cerogria* sp., Taiwan.

transverse diameter of the eye; antennae reaching almost the middle of elytra, with the terminal segment nearly half the length of the antenna. *Female*: Fore body above less closely punctate; elytra less strongly widened. Coloration in both sexes often paler. 5.5–7.5 mm. Japan (Hokkaido (including Rebun Is. and Okushiri Is.), Honshu, Shikoku, Kyushu, Yakushima); Sakhalin.…………………… …………………………………………………………………… *Lagria rufipennis* MARSEUL

3 (2) *Male*: Body less subparallel-sided; eyes medium-sized, with the distance between them about 1.2 times their transverse diameter; antennae reaching the basal 1/3 of elytra, with the terminal segment about 1/3 the length of the antenna. *Female*: Fore body above a little more strongly and closely punctate; elytra more strongly widened. Coloration in both sexes often darker. 7.5–9.5 mm. Japan (Hokkaido, Honshu, Kyushu, Izu Is.); Korea; East Siberia; China.……… …………………………………………………………………… *Lagria nigricollis* HOPE

4 (1) Head and pronotum with nearly the same coloration as the elytra. Body larger (8.5–11.5 mm), more strongly widened posteriorly. Species distributed in Ryukyu Is.

5 (6) Body larger (10.5–11.5 mm), almost black. Elytra coarsely punctate, strongly and irregularly rugose. Ryukyu (Amami-oshima). …………*Lagria notabilis* LEWIS

6 (5) Body smaller (8.5–10 mm), reddish brown to dark brown. Elytra moderately punctate and almost not rugose. Ryukyu (Okinawa-hontô, Yonagunijima). ……………………………… *Lagria okinawana* (M.T. CHÛJÔ), comb. nov. et stat. nov.

Lagria nigricollis HOPE, 1843

Figs. 19, 20 & 57.

Lagria nigricollis HOPE, 1843, Ann. Mag. nat. Hist., 11 : 63 (Chusan). — BORCHMANN, 1910, SCHENKL. Coleopt. Cat., (2) : 11. — BORCHMANN, 1915, Arch. Naturg., 81 A (6) : 66. — KÔNO, 1929, Ins. mats., 4 (1 & 2) : 27. — BORCHMANN, 1936, Gen. Ins., (204) : 30. — NAKANE, 1963 b, Icon. Ins. Japon. Col. nat. ed., 2 : 234, pl. 117, fig. 13. — CHÛJÔ, M.T., 1985 b, Coleopt. Japan Col., 3 : 342, pl. 58, fig. 7.

Type specimen. ♂, in the British Museum (Nat. Hist.), London.

Distribution. Japan (Hokkaido, Honshu, Kyushu, Izu. Is.); Korea; East Siberia; China.

Specimens examined. 61 exs.

Notes. As this species and the following one, *Lagria rufipennis* MARSEUL, closely resemble each other, we have confused them for a long time. After examining each type specimen I hereby clarify the confusion as follows: — 1) *Lagria nigricollis* and *L. rufipennis* are both good species. 2) Both species occur in Japan. 3) The specimen illustrated by NAKANE (1963 b) and also M.T. CHÛJÔ (1985 b) are not *L. nigricollis*, but *L. rufipennis*.

This species is not so common in Japan as the following one.

Lagria rufipennis MARSEUL, 1876

Figs. 1–3, 21, 22, 58 & 59.

Lagria rufipennis MARSEUL, 1876, Ann. Soc. ent. Fr., (5) 6 : 337 (Kiu-Siu, Niphon).

— BORCHMANN, 1910, SCHENKL. Coleopt. Cat., (2) : 13. — BORCHMANN, 1915, Arch. Naturg., 81 A (6) : 66. — KÔNO, 1929, Ins. mats., 4 (1 & 2): 27. — BORCHMANN, 1936, Gen. Ins., (204) : 28.

Lagria vervex MARSEUL, 1876, Ann. Soc. ent. Fr., (5) 6 : 338 (Kiu-Siu, Niphon). — BORCHMANN, 1910, SCHENKL. Coleopt. Cat., (2) : 13. Other references are omitted. **Syn. nov.**

Type specimen. ♀, in the Muséum National d'Histoire Naturelle, Paris.

Distribution. Japan (Hokkaido (including Rebun Is. and Okushiri Is.), Honshu, Shikoku, Kyushu, Yakushima); Sakhalin.

Specimens examined. Lectotype, ♀, here designated (labelled as follows: *Lagria rufipennis* Japan KiuSiu (manuscript) / TYPE (printed) / *rufipennis* Mars Fr 76. Kiusiu (m) / Lectotype *Lagria rufipennis* MARSEUL ♀ (m) Det. K. Masumoto (p), (m) 19 (p) 87 (m) / Museum Paris (p) coll. de Marseul (m)). Paralectotypes, 3 ♀♀. Additional material. 568 exs.

Notes. MARSEUL (1876) described this species based on four female specimens from Japan, and he described another species, *Lagria vervex* based on a male, at the same time. KÔNO (1929) regarded *L. vervex* as synonymous with *L. nigricollis*. BORCHMANN (1936) suggested that *L. rufipennis* and *L. vervex* are the same species, and he put "Japan" on the disrtibution of *L. nigricollis* in his key. NAKANE (1963 b) and M.T. CHÛJÔ (1985 b) illustrated a Japanese species under the name of *L. nigricollis*, but judging by the figures (at least in the male), it is clearly "*L. vervex*".

I have examined the three species comparing each type specimen and have concluded as follows:— 1) *Lagria rufipennis* and *L. vervex* are the same species and the latter is the male of the former. 2) *Lagria rufipennis* is not a synonym of *L. nigricollis* but a good species. 3) *Lagria vervex* should be a synonym of *L. rufipennis* because of page priority.

Lagria notabilis LEWIS, 1896

Figs. 16, 23, 24, 61 & 62.

Lagria notabilis LEWIS, 1896, Ann. Mag. nat. Hist., (6) 17 : 341 (Oshima). — BORCHMANN, 1910, SCHENKL. Coleopt. Cat., (2) : 11. — BORCHMANN, 1915, Arch. Naturg., 81 A (6) : 78. — KÔNO, 1929, Ins. mats., 4 (1 & 2) : 28. — CHÛJÔ, 1959, Mem. Fac. Liberal Arts & Educ., Kagawa Univ., 2 (69) : 9. — NAKANE, 1963 b, Icon. Ins. Japon. Col. nat. ed., 2 : 234, pl. 117, fig. 13.

Cerogria (*Cerogria*) *notabilis*: BORCHMANN, 1936, Gen. Ins., (204): 124.

Cerogria (*Cerogria*) *notabilis notabilis*: CHÛJÔ, M.T., 1985 a, Mushi, 50 (4) : 88.

Cerogria notabilis: CHÛJÔ, M.T., 1985 b, Coleopt. Japan Col., 3 : 342, pl. 58, fig. 8 a.

Type specimen. ♀, in the British Museum (Nat. Hist.), London.

Distribution. Ryukyu (Amami-oshima).

Specimens examined. 24 exs.

Notes. This species was described by LEWIS as a species of the genus *Lagria*. Some Japanese authors, e.g. KÔNO, CHÛJÔ and NAKANE have followed this treatment. BORCHMANN (1915) transferred this species to the genus *Cerogria*, and M.T. CHÛJÔ (1985 a & b) followed his treatment.

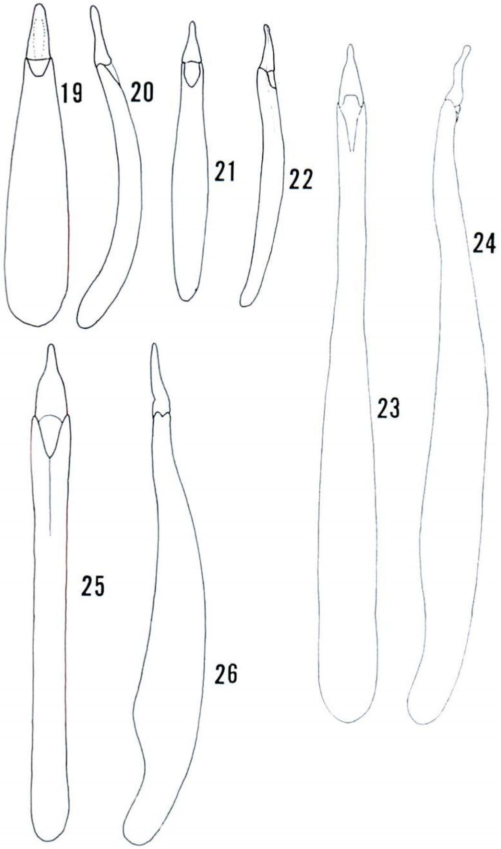
This species clearly belongs to the genus *Lagria* because the male antennae are not modified as *Cerogria*. BORCHMANN probably took Taiwanese species apparently resembling this species for the real *L. notabilis*; the antennae of the former species are modified as shown in Fig. 18.

Lagria okinawana (M.T. Chûjô, 1985), comb. nov. & stat. nov.

Figs. 17, 25, 26 & 62.

Cerogria (*Cerogria*) *notabilis okinawana* M.T. Chûjô, 1985 a, Mushi, 50 (4) : 88 (Yona, Kudeken, Mt. Yonaha, Shuri, Mt. Yonahadake; Okinawa, Ryukyus). — Chûjô, M.T., 1985 b, Coleopt. Japan. Col., 3 : 342, pl. 58, fig. 8 b.

Lagria notabilis: Chûjô, 1959, Mem. Fac. Liberal Arts & Educ., Kagawa Univ., 2 (69) : 9 (nec Lewis).



Figs. 19–26. 19, 20. *Lagria nigricollis* Hope. 21, 22. *Lagria rufipennis* Marseul. 23, 24. *Lagria notabilis* Lewis. 25, 26. *Lagria okinawana* (M.T. Chûjô).
19, 21, 23, 25. male genitalia (dorsal view); 20, 22, 24, 26. ditto (lateral view).

Type specimen. ♂, in Kyushu University.

Distribution. Ryukyu (Okinawa-hontô, Yonagunijima).

Specimens examined. 60 exs.

Notes. Although M.T. CHÛJÔ (1985 a) described this species as a subspecies of *Cerogria* (*Cerogria*) *notabilis*, it clearly belongs to the genus *Lagria* because the male antennae are not modified, and it should be raised to the specific rank by the following characteristics:

Compared with *Lagria notabilis* LEWIS: 1) The body is smaller and more slender; 2) The coloration of the body is usually lighter; 3) The antennae have the apical segments shorter; 4) The elytra are usually neither coarsely punctate nor strongly rugose.

Tribe Statirini

Genus *Arthromacra* KIRBY, 1837

Arthromacra KIRBY, 1837, Fauna Boreali-Americana IV : 238.

Type species: *Lagria aenea* SAY, 1824.

Key to the species of the genus *Arthromacra*

1 (2) Body larger (10–12.5 mm); pronotum wider than long, mostly strongly and coarsely punctate, with apical and basal margins raised, front and hind angles more or less produced in dorsal view; elytra strongly punctate, mostly rather strongly rugose, less distinctly hairy. Broadly distributed in Japan (Honshu, Shikoku, Kyushu, Yakushima). .... *Arthromacra decora* MARSEUL

2 (1) Body smaller (7.5–9.5 mm); pronotum slightly longer than wide and fairly cylindrical, mostly finely and less coarsely punctate, with apical and basal margins not distinctly raised, front and hind angles not produced in dorsal view; elytra rather strongly punctate, slightly rugose, distinctly hairy though not densely so. Distributed in Ryukyu Is. (Amami-oshima, Okinawa-hontô). .... *Arthromacra amamiana* NAKANE

Arthromacra decora (MARSEUL, 1876)

Figs. 4–6, 27–36 & 63–67.

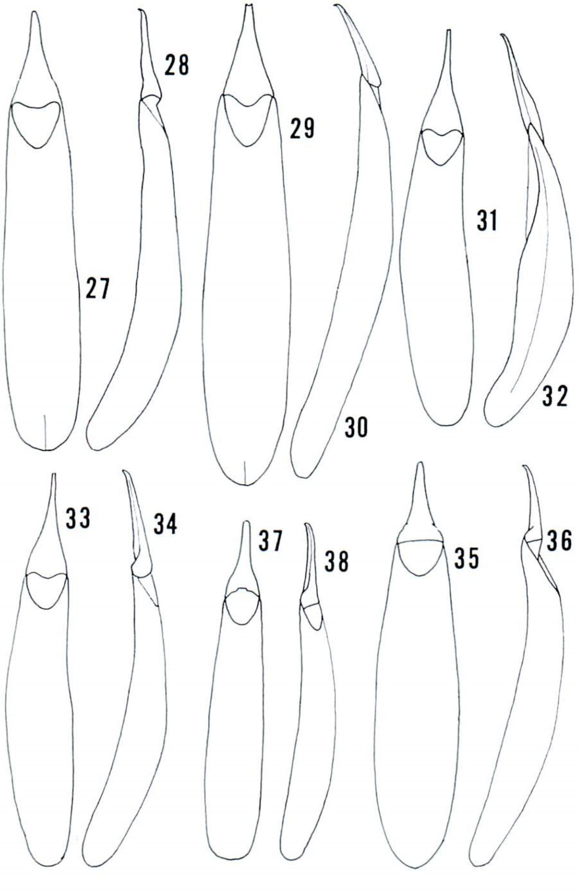
Lagria decora MARSEUL, 1876, Ann. Soc. ent. Fr., (5) 6 : 339 (Hiogo).

Arthromacra decora: LEWIS, 1895, Ann. Mag. nat. Hist., (6) 15 : 278, fig. 3 (p. 422). — BORCHMANN, 1910, SCHENKL. Coleopt. Cat., (2) : 15. — BORCHMANN, 1915, Arch. Naturg., 81 A (6) : 134. — KÔNO, 1929, Ins. mats., 4 (1 & 2) : 30. — BORCHMANN, 1936, Gen. Ins., (204) : 182. — NAKANE, 1963 b, Icon. Ins. Japon. Col. nat. ed., 2 : 234, pl. 117, fig. 19 a, b. — CHÛJÔ, M.T., 1985 b, Coleopt. Japan Col., 3 : 342, pl. 58, fig. 12.

Arthromacra viridissima LEWIS, 1895, Ann. Mag. nat. Hist., (6) 15 : 277 (Miyanoshita, Oyama, Tokio, Nikko and Hitoyoshi). — BORCHMANN, 1910, SCHENKL. Coleopt. Cat., (2) : 16. — BORCHMANN, 1915, Arch. Naturg., 81 A (6) : 133. — KÔNO, 1929, Ins. mats., 4 (1 & 2) : 30. — BORCHMANN, 1936, Gen. Ins., (204) : 181. — NAKANE, 1963 b, Icon. Ins. Japon. Col. nat. ed., 2 : 234, pl. 117, fig. 16. — CHÛJÔ, M.T., 1985 b, Coleopt. Japan Col., 3 : 342, pl. 58, fig. 9. **Syn. nov.**

Arthromacra sumptuosa Lewis, 1895, Ann. Mag. nat. Hist., (6) 15 : 277 (Chiuzenji). — Borchmann, 1910, Schenkl. Coleopt. Cat., (2) : 16. — Borchmann, 1915, Arch. Naturg., 81 A (6) : 134. — Kôno, 1929, Ins. mats., 4 (1 & 2) : 30. — Borchmann, 1936, Gen. Ins., (204) : 182. — Nakane, 1963 b, Icon. Ins. Japon. Col. nat. ed., 2 : 234, pl. 117, fig. 17. — Chûjô, M.T., 1985 b, Coleopt. Japan Col., 3 : 342, pl. 58, fig. 11. **Syn. nov.**

Arthromacra higoniae Lewis, 1895, Ann. Mag. nat. Hist., (6) 15 : 278 (Yuyama in



Figs. 27–38. 27, 28. *Arthromacra decora* (Marseul), Takaozan. 29, 30. ditto, Okunikko. 31, 32. ditto, Ôdai. 33, 34. ditto, Kongô-san. 35, 36. ditto, Yakushima. 37, 38. *Arthromacra amamiana* Nakane.
27, 29, 31, 33, 35, 37. male genitalia (dorsal view); 28, 30, 32, 34, 36, 38. ditto (lateral view).

Higo), — BORCHMANN, 1910, SCHENKL. Coleopt. Cat., (2) : 15. — BORCHMANN, 1915, Arch. Naturg., 81 A (6) : 133. — KÔNO, 1929, Ins. mats., 4 (1 & 2) : 31. — BORCHMANN, 1936, Gen. Ins., (204) : 182. — NAKANE, 1963 b, Icon. Ins. Japon. Col. nat. ed., 2 : 234. — CHÛJÔ, M.T., 1985 b, Coleopt. Japan Col., 3 : 343. **Syn. nov.**

Arthromacra apicalis KÔNO, 1929, Ins. mats., 4 (1 & 2) : 31 (Honshu (Nikko)). — BORCHMANN, 1936, Gen. Ins., (204) : 182. — NAKANE, 1963 b, Icon. Ins. Japon. Col. nat. ed., 2 : 234. — CHÛJÔ, M.T., 1985 b, Coleopt. Japan Col., 3 : 343. **Syn. nov.**

Type specimen. ♀, in the Muséum National d'Histoire Naturelle, Paris.

Distribution. Japan (Honshu, Shikoku, Kyushu, Yakushima).

Specimens examined. 1,283 exs.

Notes. I have examined not only each type specimen of the above "species" but also a great many specimens from various areas of Japan, and have concluded that they are the same species and that *Arthromacra viridissima*, *A. sumptuosa*, *A. higoniae* and *A. apicalis* are synonyms of *A. decora* (MARSEUL).

Specimens of this species are extremely varied in body size, shape, coloration, punctation and rugosity on surfaces depending on their locality (including altitude), sexuality and individuals in each locality. Major variations as follows:

1) Body size: Mostly ranged between 10–12.5 mm. Specimens of Northeast Honshu are comparatively large and those of Southwest are rather small. The specimens in the montane zone of Central Honshu often very large, while that of West Japan, e.g. Odai, Mie Pref., are sometimes very small. Those of Yakushima are varied in size. The male is usually smaller than the female.

2) Body shape: The body is slightly flattened in large individuals, while it is rather cylindrical in small ones. The males are more elongate than the females, with the apices of the elytra more strongly produced than those of the female.

3) Punctation and rugosity of the dorsal surface: The head and pronotum are mostly strongly and irregularly punctate, closely and rugosely so in some individuals, but rather weakly and sparsely so in others. The elytra are fairly closely and strongly punctate, mostly transversely rugose. The specimens in the montane zone of Central Honshu are often extremely rugose, though those in West Honshu are often less strongly so.

4) Coloration: Usually the dorsal surface is metallic green and legs and antennae (except apical portion of antennae and also that of femora) are yellowish brown. Among these specimens, there are often reddish coppery, purplish coppery, or golden coppery ones, whose antennae and legs are sometimes wholly yellowish or completely darkened.

Major characteristics of the various specimens which were falsely described as good speices are as follows:

"*Arthromacra viridissima*" (see Fig. 64): Dorsal surface bright metallic green; head and pronotum coarsely and closely punctate; elytra transversely rugosely punctate.

"*Arthromacra sumptuosa*" (see Fig. 65): Dorsal surface purplish copper; antennae and legs wholly and 'obscurely' black. Differs from the preceding "species" by the shorter and more robust antennae, the shorter and less cylindrical pronotum, and the elytra less acuminate at apices.

"*Arthromacra higoniae*" (see Fig. 66): Dorsal surface golden coppery; antennae and legs 'obscurely' black; pronotum very clearly punctate, though the punctures are separated one from another; elytra sculptured like those of *A. viridissima*. 'In form it is intermediate between *A. sumptuosa* and *decora*' (original description).

"*Arthromacra apicalis*" (see Fig. 67): Dark brown; elytra coppery brown with posterior half shining greenish; antennae and legs reddish yellow; pronotum rather closely punctate.

Arthromacra amamiana NAKANE, 1963

Figs. 37, 38 & 68.

Arthromacra amamiana NAKANE, 1963 a, Fragm. Coleopt., (7) : 30 (Ikari, Amami-Oshima). — NAKANE, 1963 b, Icon. Ins. Japon. Col. nat. ed., 2 : 243, pl. 117, fig. 18. — CHÛJÔ, M.T., 1985 a, Mushi, 50 : 89. — CHÛJÔ, M.T., 1985 b, Coleopt. Japan Col., 3 : 342, pl. 58, fig. 10.

Type specimen. Not seen; probably in the private collection of NAKANE.

Distribution. Ryukyu (Amami-oshima, Okinawa-hontô).

Specimens examined. 73 exs.

Notes. The coloration varies, e.g. golden greenish dorsal surface with yellowish brown legs to dark bluish dorsal surface with dark brown legs.

This species is related to not only *Arthromacra decora* (MARSEUL), broadly distributed in major islands of Japan, but also some species from Taiwan. These species possibly form a species-group which is widespread and geographically variable.

Genus *Macrolagria* LEWIS, 1895

Macrolagria LEWIS, 1895, Ann. Mag. nat. Hist., (6) 15: 422.

Type species: *Statira rufobrunnea* MARSEUL, 1876.

Key to the species of the genus *Macrolagria*

1 (4) Pronotum somewhat barrel-shaped and moderately convex above, with angles not so remarkably prominent. Body fairly densely clothed with long hairs.

2 (3) Pronotum more closely punctate with front angles almost rounded; elytra punctate-striate though the striae indistinct, punctures in striae a little larger and slightly transverse; intervals slightly convex and feebly wrinkled. 8–11 mm. Japan (Hokkaido, Honshu, Shikoku, Kyushu, Yakushima); Northeast China.………………………………………………………… *Macrolagria robusticeps* (LEWIS), comb. nov.

3 (2) Pronotum less closely punctate with front angles more or less prominent; elytra clearly punctate-striate, punctures on striae smaller and round; intervals almost flat and hardly wrinkled. 8.5–10.5 mm. Japan (Honshu).……………………………………………………………………………… *Macrolagria hirsuta* LEWIS

4 (1) Pronotum rather transverse and only gently convex above, with front angles remarkably prominent. Body comparatively not densely clothed with long hairs.

5 (6) Eyes medium-sized, distance between them about 3.5–4 times their diameter; pronotum with front angles strongly projected; elytra punctate-striate, punctures slightly transverse, with intervals more or less alutaceous and feebly irregularly

wrinkled. Body brownish black (elytra, antennae and legs lighter in colour in some individuals), less strongly shining above. 10–12 mm. Japan (Honshu).…… …………………………………………………………………… *Macrolagria shibatai* sp. nov.

6 (5) Eyes fairly large; pronotum with front angles not so strongly projected but rather noticeably angulate; elytra clearly punctate-striate, punctures round; intervals almost not wrinkled. Body more or less lighter in colour and more strongly shining above.

7 (8) Head not flattened but impressed at the middle of interocular space, of which the distance is about twice the diameter of the eyes in males, about 2.2 times in females; pronotum slightly transverse and less closely punctate, moderately widened in apical 1/3; elytra comparatively less clearly punctate-striate, punctures less closely set and shallower; intervals less strongly convex in inner portion. Body usually lighter in colour (yellowish brown, though some individuals darker), less strongly shining above. 9–12 mm. Japan (Honshu, Shikoku, Kyushu). …… ………………………………………………………………… *Macrolagria rufobrunnea* (MARSEUL)

8 (7) Head weakly flattened between eyes, with interocular space about 1.5 times eye transverse diameter in males, about 3.5 times in females; pronotum more closely punctate, noticeably widened in apical 1/3 in typical individuals; elytra more clearly punctate-striate, punctures more closely set; intervals more strongly convex in inner portion. Body mostly brownish black, more strongly shining above. 9.5–12 mm. Japan (Honshu).……………………*Macrolagria fujisana* LEWIS[1]

Macrolagria rufobrunnea (MARSEUL, 1876)

Figs. 7–9, 39, 40 & 69.

Statyra rufobrunnea MARSEUL, 1876, Ann. Soc. ent. Fr., (5) 6 : 340 (Kiu-Siu (Omuza)).

Nemostira rufobrunnea: BORCHMANN, 1910, SCHENKL. Coleopt. Cat., (2) : 18. — KÔNO, 1929, Ins. mats., 4 (1 & 2) : 34. — NAKANE, 1963 b, Icon. Ins. Japon. Col. nat. ed., 2 : 235, pl. 117, fig. 13.

Macrolagria rufobrunnea: BORCHMANN, 1936, Gen. Ins., (204) : 335. — CHÛJÔ, M.T., 1985 b, Coleopt. Japan Col., 3 : 344, pl. 58, fig. 18.

Type specimen. ♀, in the Muséum National d'Histoire Naturelle, Paris.

Distribution. Japan (Honshu, Shikoku, Kyushu).

Specimens examined. 369 exs.

Notes. This species is very similar to *M. fujisana* LEWIS.

Macrolagria robusticeps (LEWIS, 1895), comb. nov.

Figs. 41–44, 70 & 71.

Eutrapela robusticeps LEWIS, 1895, Ann. Mag. nat. Hist., (6) 15 : 276 (Sapporo). — BORCHMANN, 1910, SCHENKL. Coleopt. Cat., (2) : 13.

Arthromacra robusticeps: BORCHMANN, 1915, Arch. Naturg., 81 A (6) : 131. — KÔNO, 1929, Ins. mats., 4 (1 & 2) : 32. — BORCHMANN, 1936, Gen. Ins., (204) : 185. — NAKANE, 1963 b, Icon. Ins. Japon. Col. nat. ed., 2 : 234, pl. 117, fig. 20. — CHÛJÔ, M.T., 1985 b, Coleopt. Japan Col., 3 : 343, pl. 58, fig. 13.

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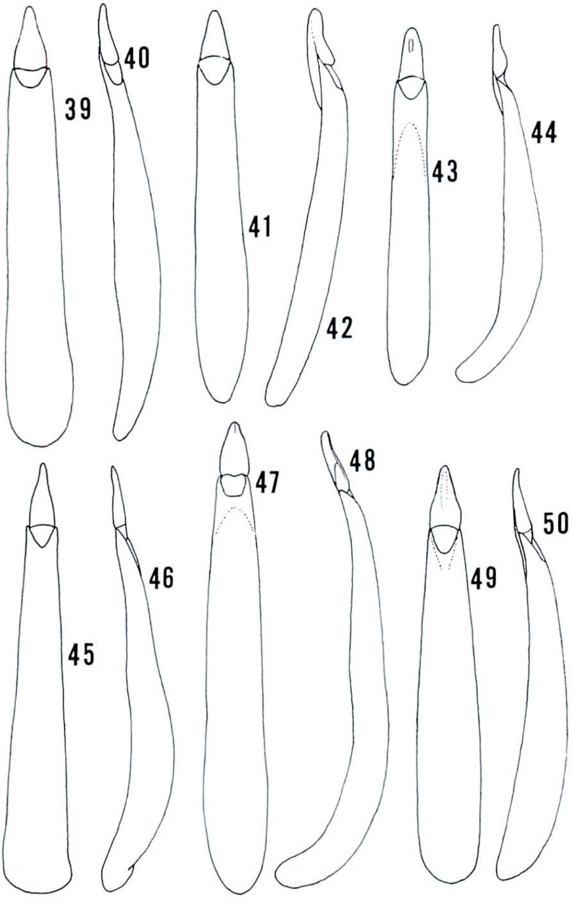
1) Doubtful species, see p. 51.

Type specimen. ♀, in the British Museum (Nat. Hist.), London.

Distribution. Japan (Hokkaido, Honshu, Shikoku, Kyushu, Yakushima); Northeast China.

Specimens examined. 278 exs.

Notes. This species was described by LEWIS (1895) as a species of the genus *Eutrapela*, which belongs in the subfamily Lagriinae sensu BORCHMANN. The species of the genus are mainly distributed in the Afrotropical region. BORCHMANN (1915)



Figs. 39–50. 39, 40. *Macrolagria rufobrunnea* (MARSEUL). 41, 42. *Macrolagria robusticeps* (LEWIS), Hokkaido. 43, 44. ditto, Kyushu. 45, 46. *Macrolagria fujisana* LEWIS. 47, 48. *Macrolagria hirsuta* (LEWIS). 49, 50. *Macrolagria shibatai* sp. nov.
39, 41, 43, 45, 47, 49. male genitalia (dorsal view); 40, 42, 44, 46, 48, 50. ditto (lateral view).

transferred this species to the genus *Arthromacra*, which also belongs in the Lagriinae, though the species closely resembles *Macrolagria hirsuta* because of its distinctly hairy body with elytra clearly punctate-striate. He probably attached importance to the characteristics of its fairly cylindrical pronotum with four angles (especially the front ones) not being prominent.

Macrolagria fujisana LEWIS, 1895

Figs. 45, 46 & 72.

Macrolagria fujisana LEWIS, 1895, Ann. Mag. nat. Hist., (6) 15 : 422 (Chiuzenji, Miyanoshita, and in other places in the plain of Fujisan). — CHÛJÔ, M.T., 1985 b, Coleopt. Japan Col., 3 : 344, pl. 58, fig. 19.

Nemostira fujisana: BORCHMANN, 1910, SCHENKL. Coleopt. Cat., (2) : 18. — KÔNO, 1929, Ins. mats., 4 (1 & 2) : 35.

Type specimen. ♂, in the British Museum (Nat. Hist.), London.

Distribution. Japan (Honshu).

Specimens examined. 148 exs.

Notes. According to LEWIS (1895), this species differs from *Macrolagria rufobrunnea* (MARSEUL) by the body smaller, the head narrower with the eyes less prominent, the antennal segments less constricted at their bases, and the body much darker in colour. Among the specimens of *M. rufobrunnea*, we can find individuals whose characteristics are fitted with above comments. Therefore, this species might be a local or individual variation of *M. rufobrunnea*.

Macrolagria hirsuta LEWIS, 1895

Figs. 47, 48 & 73.

Macrolagria hirsuta LEWIS, 1895, Ann. Mag. nat. Hist., (6) 15 : 423 (Chiuzenji and Niohosan). — BORCHMANN, 1936, Gen. Ins., (204) : 334.

Nemostira hirsuta: BORCHMANN, 1910, SCHENKL. Coleopt. Cat., (2) : 18. — KÔNO, 1929, Ins. mats., 4 (1 & 2) : 34. — NAKANE, 1963 b, Icon. Ins. Japon. Col. nat. ed., 2 : 234, pl. 117, fig. 21.

Type specimen. ♂, in the British Museum (Nat. Hist.), London.

Distribution. Japan (Honshu).

Specimens examined. 82 exs.

Notes. This species occurs in the montane zone of Central Honshu.

Macrolagria shibatai sp. nov.

Figs. 49, 50 & 74.

Brownish black, with ventral portion partly lighter in colour, hairs on surfaces pale yellowish brown (elytra, antennae and legs brown in some individuals); each surface gently shining and sparsely clothed with fairly long hairs. Elongate and rather subparallel-sided, moderately convex above and feebly flattened in the middle.

Male. Head somewhat transverse elliptical, about 0.8 times width of pronotum, irregularly and rather rugosely punctate; clypeus transverse and clearly depressed, gently bent downwards and moderately arcuate in front; genae produced obliquely forwards; eyes medium-sized and slightly oblique, roundly produced laterad, with interocular space about 3.5 times eye diameter; vertex hardly convex, slightly impressed in the middle; antennae barely reaching the middle of elytra, segment 1st bold, 2nd small and truncate-conical, 3rd to 11th rather slender, ratio of length from 1st to 11th: 11, 6, 15, 13, 14, 15, 15, 17, 17, 16, 31.

Pronotum a little less than 1.2 times as wide as long, widest at apex; apical margin feebly ridged; base bordered by punctate groove; lateral margins sinuous near base; front angles distinctly projected obliquely forwards; hind angles rounded in dorsal view; disc moderately convex, rather coarsely and unevenly punctate, each puncture with a fairly long hair. Scutellum short linguiform, feebly convex and finely, rugosely punctate.

Elytra a little less than 2.4 times as long as wide, widest at apical 4/9, gradually narrowed towards base and rounded apically, about 5 times length and 1.7 times width of pronotum; disc moderately convex and slightly flattened in the middle, punctate-striate, the striae rather shallow and vague, the punctures on striae fairly closely set and transversely, slightly rugose; intervals weakly convex, more or less alutaceous and feebly irregularly wrinkled.

Abdomen with anal sternite truncate at apex.

Ratio of length of pro-, meso- and metatarsomeres: 13, 10, 8, 8, 17; 18, 12, 11, 8, 19; 33, 15, 9, 22, respectively.

Male genitalia shown as in Figs. 49 & 50.

Female. Body feebly widened posteriorly. Antennae reaching basal 1/3 of elytra; eyes smaller and more oblique, distance between them 4 times their diameter; pronotum less strongly prominent at front angles; elytra more clearly punctate-striate.

Body length: 10–12 mm.

Holotype: ♂, Tsugaike, Nagano Pref., Central Honshu, 28. VII. 1966, K. SAKAI leg. Paratypes: 1 ex., same data as the holotype; 31 exs., Tsugaike, 11. VII. 1987, K. MASUMOTO leg.; 1 ex., Kamikôchi, Nagano Pref., 13. VII. 1961, H. NOMURA leg.; 1 ex., Kamikôchi, 15. VII. 1961, H. NOMURA leg.; 1 ex., Mt. Togakushi, Nagano Pref., 27. VII. 1978, T. FUJISAWA leg.; 1 ex., Hakkôda-san, Aomori Pref., North Honshu, 13. VII. 1954, T. KUMATA leg.

Notes. This new species somewhat resembles *Macrolagria rufobrunnea* (MARSEUL) in typical form, but can be distinguished from the latter by the body being sparsely clothed with long hairs, the eyes smaller with wider interocular space, the pronotum with distinctly prominent front angles, and the elytra less clearly punctate-striate. In small individuals, the species rather resembles *M. hirsuta* LEWIS, but can be distinguished from the latter by the body less strongly convex above, the pronotum more closely punctate and noticeably widened forwards with distinctly prominent front angles, the elytra with intervals more or less alutaceous and feebly irregularly wrinkled, and the differently shaped male genitalia.

Genus *Anisostira* BORCHMANN, 1915

Anisostira BORCHMANN, 1915, Ent. Mitteil., 4 : 296.
Type species : *Anisostira varicolor* BORCHMANN, 1915.

Key to the species of the genus *Anisostira*

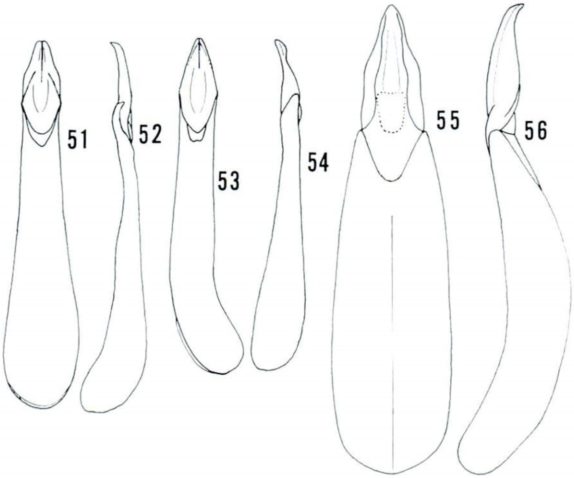
1 (2) Eyes larger and less transverse ; pronotum strongly though sparsely punctate ; elytra more strongly, often rugosely punctate ; hind tibiae in males more strongly curved and more complex in shape. Brownish black, with elytra and often basal portion of pronotum reddish brown to yellowish brown. 9.5–12 mm. Ryukyu (Amami-oshima, Tokunoshima, Okinoerabujima, Okinawa-hontô, Miyakojima). .... *Anisostira rugipennis* (LEWIS)

2 (1) Eyes smaller and more transverse ; pronotum almost impunctate ; elytra less strongly, more closely punctate ; hind tibiae in males less strongly curved and more simple in shape. Black, with pronotum and major portions of middle and hind femora orange, elytra metallic dark blue. 9.5–11 mm. Ryukyu (Okinawa-hontô, Ishigakijima, Iriomotejima)................................*Anisostira elegans* CHÛJÔ

Anisostira rugipennis (LEWIS, 1896)

Figs. 51, 52, 75 & 76.

Macrolagria rugipennis LEWIS, 1896, Ann. Mag. nat. Hist., (6) 17 : 341 (Oshima).



Figs. 51–56. 51, 52. *Anisostira rugipennis* (LEWIS). 53, 54. *Anisostira elegans* CHÛJÔ. 55, 56. *Casnonidea occipitalis* (BORCHMANN). 51, 53, 55. male genitalia (dorsal view) ; 52, 54, 56. ditto (lateral view).

Nemostira rugipennis: BORCHMANN, 1910, SCHENKL. Coleopt. Cat., (2) : 18.

Nemostira rugipennis var. *ferriei* PIC, 1914, Ann. Soc. ent. Fr., 1914 : 304.

Anisostira rugipennis: KÔNO, 1929, Ins. mats., 4 (1 & 2) : 33. — BORCHMANN, 1936, Gen. Ins., (204) : 455. — CHÛJÔ, 1959, Mem. Fac. Liberal Arts & Educ., Kagawa Univ., 2 (69) : 9. — NAKANE, 1963 b, Icon. Ins. Japon. Col. nat. ed., 2 : 234, pl. 118, fig. 1. — CHÛJÔ, M.T., 1985 b, Coleopt. Japan Col., 3 : 343, pl. 58, fig. 15.

Type specimen. ♂, in the British Museum (Nat. Hist.), London.

Distribution. Ryukyu (Amami-oshima, Tokunoshima, Okinoerabujima, Okinawa-hontô, Miyakojima).

Specimens examined. 126 exs.

Notes. This species varies in surface coloration and punctation, especially distinctly so in the elytra, e.g. coloration — yellowish brown or dark brown; punctation — strongly though rather evenly punctate to coarsely, strongly rugosely punctate. These variations in the characters most likely depend upon individual variation or possibly somewhat local variation, though we can not find any important characters which we can use for taxonomic separation.

The type specimen is almost wholly dark brown, while the elytra of the PIC's variety are yellowish brown.

Anisostira elegans CHÛJÔ, 1959

Figs. 53, 54 & 77.

Anisostira elegans CHÛJÔ, 1959, Mem. Fac. Liberal Arts & Educ., Kagawa Univ., 2 (69) : 8 (Katsuzen, Is. Okinawa). — CHÛJÔ, 1970, Mem. Fac. Educ., Kagawa Univ., 2 (192) : 46.

Anisostira abnormipes: CHÛJÔ, M.T., 1985 a, Mushi, 50 : 89. — CHÛJÔ, M.T., 1985 b, Coleopt. Japan Col., 3 : 343, pl. 58, fig. 16 (nec BORCHMANN).

Type specimen. ♂, in CHÛJÔ collection preserved by Prof. SATÔ.

Specimens examined. 41 exs.

Distribution. Ryukyu (Okinawa-hontô, Ishigakijima, Iriomotejima).

Notes. Cited as the above, CHÛJÔ (1959) described this species and he (1970) gave corrective comments concerning coloration of the body and described the sexual differences for the first time. I cannot understand why M.T. CHÛJÔ (1985 a) regarded this species as a synonym of *Anisostira abnormipes* (BORCHMANN), which was originally described from Taiwan.

Genus *Casnonidea* FAIRMAIRE, 1882

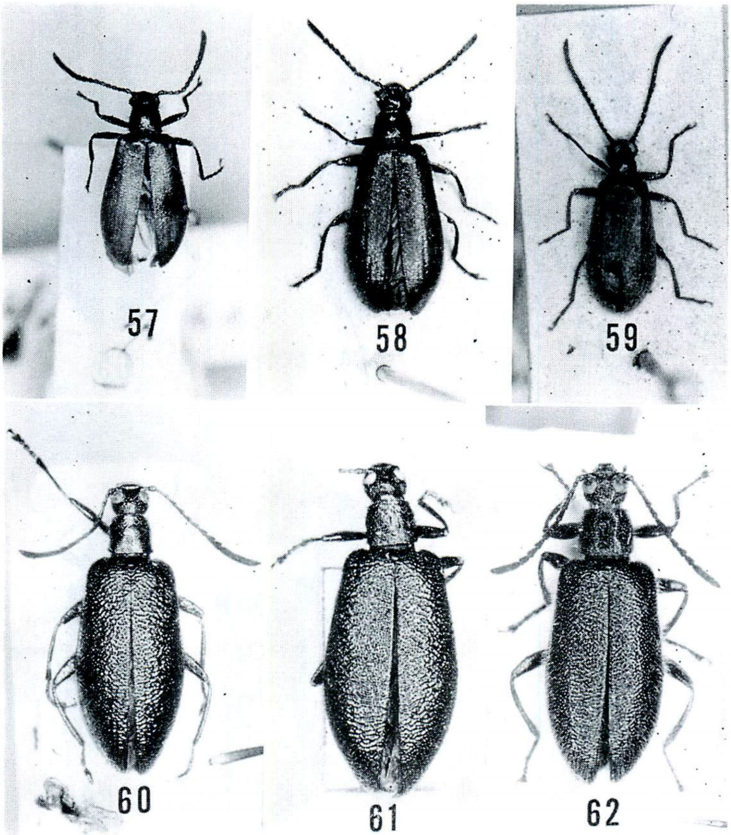
Casnonidea FAIRMAIRE, 1882, Notes Leyd. Mus., 4 : 264.

Type species: *Casnonidea homomelaena* FAIRMAIRE, 1882.

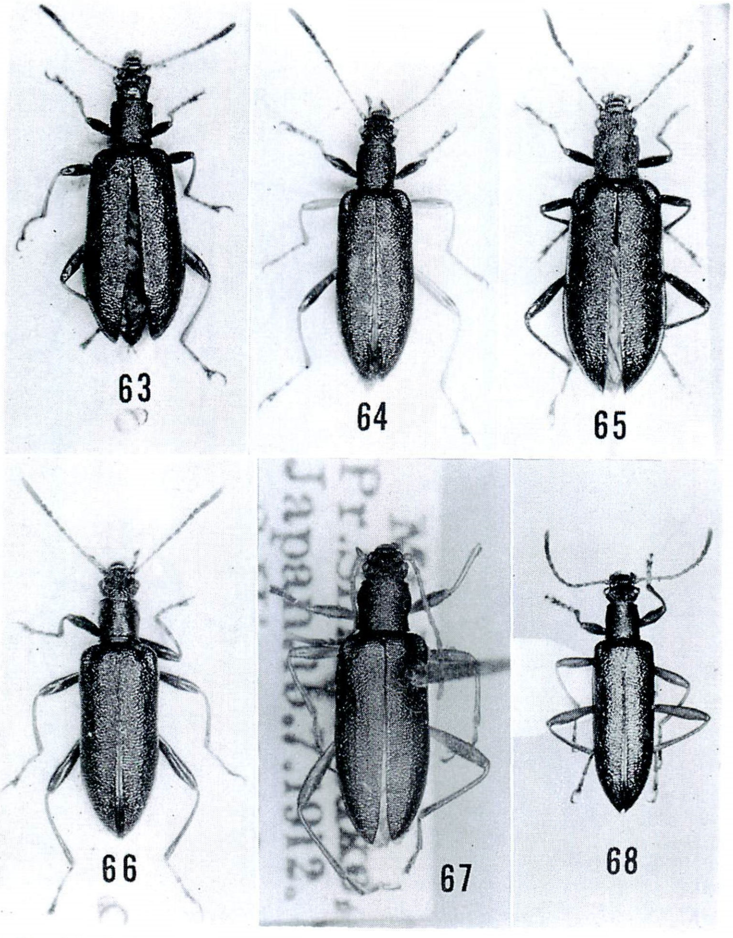
Casnonidea occipitalis (BORCHMANN, 1912)

Figs. 55, 56 & 78.

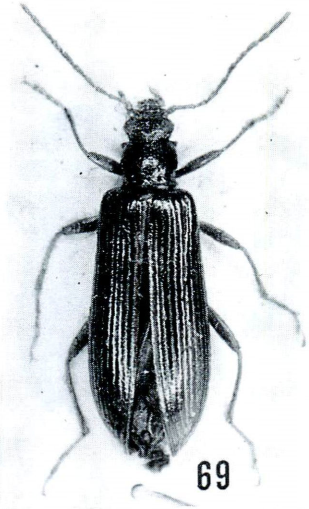
Nemostira occipitalis BORCHMANN, 1912, Suppl. ent., (1) : 8 (Tainan, Taihorinsho, Hoozan). — KÔNO, 1929, Ins. mats., 4, (1 & 2) : 32.



Figs. 57–62. 57. *Lagria nigricollis* Hope, ♂, holotype.
58. *Lagria rufipennis* Marseul, ♀, lectotype.
59. ditto, ♀, (*L. vervex* Marseul, type).
60, 61. *Lagria notabilis* Lewis; 60. ♂, 61. ♀, syntype.
62. *Lagria okinawana* (M.T. Chûjô), ♂.



Figs. 63–68. 63. *Arthromacra decora* (MARSEUL), ♀, holotype.
64. ditto, ♀, (*A. viridissima* LEWIS, syntype).
65. ditto, ♀, (*A. sumptuosa* LEWIS, syntype).
66. ditto, ♀, (*A. higoniae* LEWIS, syntype).
67. ditto, ♂, (*A. apicalis* KÔNO, holotype).
68. *Arthromacra amamiana* NAKANE, ♂.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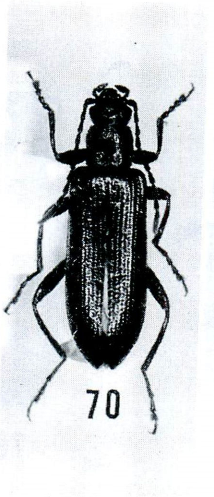
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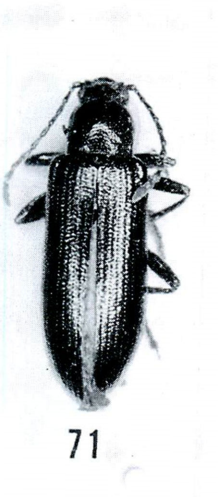
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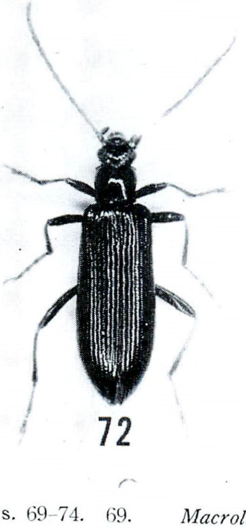
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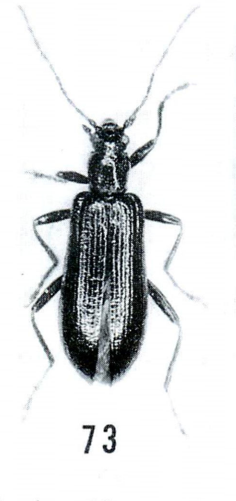
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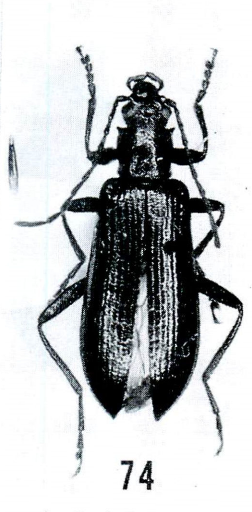
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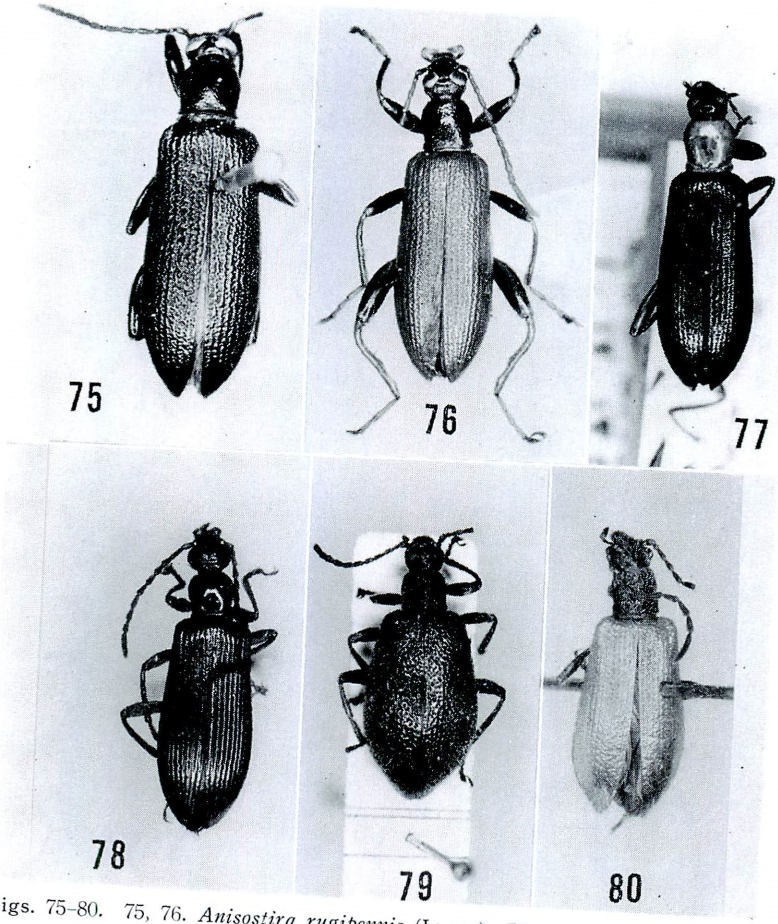
Figs. 69–74. 69. *Macrolagria rufobrunnea* (MARSEUL), ♀, holotype.
70, 71. *Macrolagria robusticeps* (LEWIS); 70. ♂, 71. ♀, syntype.
72. *Macrolagria fujisana* LEWIS, ♂, syntype.
73. *Macrolagria hirsuta* LEWIS, ♂, syntype.
74. *Macrolagria shibatai* sp. nov., ♂, holotype.



Figs. 75–80. 75, 76. *Anisostira rugipennis* (LEWIS); 75. ♂, syntype, 76. *A. rugipennis* var. *ferriei* PIC, ♂.
77. *Anisostira elegans* CHÛJÔ, ♂, holotype.
78. *Casnonidea occipitalis* (BORCHMANN), ♂, lectotype.
79. *Lagria formosensis* BORCHMANN, ♂, syntype, Taiwan.
80. *Arthromacra abnormalis* KÔNO, ♂, holotype, Taiwan.

Casnonidea occipitalis: BORCHMANN, 1936, Gen. Ins., (204) : 386. — CHÛJÔ, M.T., 1985 a, Mushi, 50 : 89. — CHÛJÔ, M.T., 1985 b, Coleopt. Japan Col., 3 : 343, pl. 58, fig. 17.

Type specimen. ♂, in the Akademie der Landwirtschaftswissenschaften der Deutschen Demokratischen Republik, Institut für Pflanzenschutzforschung, Bereich, Eberswalde.

Distribution. Ryukyu (Ishigakijima, Iriomotejima); Taiwan.

Specimens examined. Lectotype, ♂, here designated, (labelled as follows: Taihorinsho (manuscript) Formosa Sauter (printed) VIII (m) 09 (p) / *Nemostira occipitalis* Type! m. (m) / Borchmann det. (p) / Syntypus (p) / Lectotype *Casnonidea occipitalis* (BORCHMANN, 1912) ♂ (m) Det. K. Masumoto (p) , (m) 19 (p) 87 (m) / Coll. DEI Eberswalde (p)). Paralectotypes, 2 ♂♂. Additional material. 4 exs.

Notes. M.T. CHÛJÔ (1985 b) missed the distribution, Taiwan, which is the type locality.

Incertae sedis

CHÛJÔ (1959) recorded *Lagria formosensis* BORCHMANN from Okinawa-hontô. I have not seen any specimens of this species.

M.T. CHÛJÔ (1985 b) illustrated a species from Ishigakijima under the name of *Arthromacra abnormalis* KÔNO, originally described from Taiwan. Judging from the figure, the specimen is unlikely to be a true *Arthromacra abnormalis*. I have examined the type specimen and it is obvious that the species does not belong to the genus *Arthromacra* but probably to *Macrolagria* (like *Macrolagria robusticeps* (LEWIS)).

Additional accounts

NAKANE (1963 b) illustrated *Lagria fuscata* MOTSCHULSKY, originally described from Daourie, East Siberia ("Daurien" in the BORCHMANN Catalogue (1910)). Tracing the record of the species back to the origin, we can find the specific name in the catalogue by LEWIS (1879). The record of this species was borrowed by SCHÖNFELDT (1887), though LEWIS (1895 & 1896) himself omitted the record from the fauna of Japan. The specimen presented by NAKANE is probably not a Japanese one.

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Two New Species of the Genus *Addia* from Taiwan (Coleoptera, Tenebrionidae)

By TAKASHI NAKAKITA

In the present paper I intend to describe the Taiwanese two new species belonging to the genus *Addia* LEWIS.

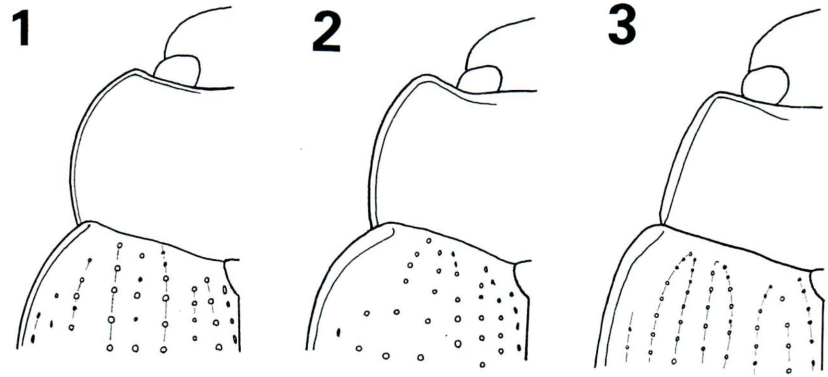
I am very pleased to dedicate the present paper to Mr. TAICHI SHIBATA in celebration of his 61st birthday. On this happy occasion I wish to express my hearty thanks to Mr. TAICHI SHIBATA for his constant guidance and kind advices in studying on Tenebrionidae, and my deep thanks are also due to the members of the Osaka Coleopterological Society for their kind assistances in literature, materials and various ways.

Addia shibatai sp. nov. (Figs. 1, 4)

♂. Body oblong, nearly twice as long as wide, moderately convex above; shining, black, antennae, legs and under surface of body blackish brown, upper surface with a metallic tinge, which is faintly bronzy on pronotum, deeply greenish on elytra except purplish basal half of sutural intervals and rows of seriate punctures, the purplish tinge variable in extent under the certain light.

Head transverse, with punctures close and somewhat irregular on clypeus, but suddenly becoming finer and sparser behind, spaces among the punctures finely microsculptured, the microsculpture slightly weaker on frons, frontal suture finely impressed and evanescent near latero-apical margins of head, vertex weakly and indistinctly depressed, eyes transverse, a little produced laterally, inter-ocular space weakly convex and nearly 1.5 times as wide as transverse diameter of single eye. Antennae relatively long, reaching base of elytra, five apical joints forming an elongate club, 7th to 10th subtriangular, subequal in length to each other and dilated toward respective apex, 7th longer than wide, the others almost as wide as long, 11th oval, slightly wider than 10th. Mentum subscutiform, convex in middle, sulcate along lateral sides and slightly emarginate at apex, terminal joint of maxillary palpi securiform, with apical margin obliquely truncate, as long as the outer mar-

〔Ent. Rev. Japan, Vol. XLII, Suppl., pp. 61-64, Dec., 1987〕



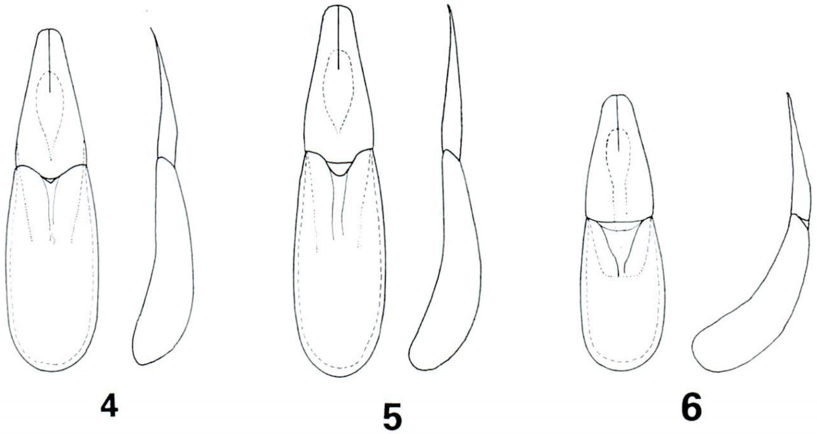
Figs. 1–3. Left side of fore body of *Addia* spp.
1. *A. shibatai* sp. nov., ♂. 2. *A. monticola* sp. nov., ♂. 3. *A. scatebrae* Lewis, ♂.

gin and 1.4 times as long as the inner margin.

Pronotum transverse, twice as wide as long, widest near basal third, from which sides arcuately narrowed in front, but more gently behind, and narrowly thickly bordered, apical side deeply emarginate, weakly bordered except median third, basal side bisinuate, apical angles more or less widely rounded and a little produced forward, basal angles quite concealed by humeral corners of elytra when viewed from above (Fig. 1); disc moderately convex, finely and not so sparsely punctate, the punctures shallower laterally, spaces among them microsculptured as on frons. Scutellum rather small, subtriangular, with a few and fine punctures.

Elytra a half longer than wide, more than 4.5 times as long as pronotum, sides weakly expanded near middle, clearly but narrowly bordered and shallowly furrowed along the borders, base well fitting in curve with pronotal base except latero-humeral corners, which are obtusely rounded but distinct and a little produced over basal angles of pronotum (Fig. 1); disc seriately punctate, the punctures strong and coarse, partly fovea-like, rows of seriate punctures on lateral and basal areas forming vestigial striae, intervals scarcely convex and minutely punctate, with microsculpture very weak or almost absent.

Under surface with a fine microsculpture except median area of metasternum. Prosternum longitudinally convex in middle, very sparsely and obsoletely punctate, but almost impunctate laterally, prosternal process slightly widened behind, bisulcate between procoxae and triangular at apex. Mesosternum deeply excavate in a shape of V, metasternum sparsely and minutely punctate, but on lateral areas coarsely punc-



Figs. 4–6. Male genitalia of *Addia* spp. (dorsal view and lateral view).
4. *A. shibatai* sp. nov. 5. *A. monticola* sp. nov. 6. *A. scatebrae* LEWIS.

tate as on metepisterna. Abdomen minutely punctate, the punctures somewhat closer on anal sternite, 1st, 2nd and basal half of 3rd abdominal sternites shallowly and longitudinally rugose laterally. Legs of moderate size, femora fusiform, tibiae slightly dilated toward apex, with yellowish hairs on each inner-apical side, tarsi rather thick, with yellowish pubescence beneath, 4th joint of protarsi smaller than 3rd.

Aedeagus boat-shaped (Fig. 4) as in *A. scatebrae* (Fig. 6), but much larger and longer, in lateral view more curved ventrally in apical fifth.

♀. Unknown.

Length: 7.6–7.8 mm. Width: 3.9–4.0 mm.

Holotype: ♂, Mt. Houhuan, Nantou Hsien, 4. V. 1982, T. ITO leg. (in T. SHIBATA coll.); paratype: 1♂, Mt. Yushan, Nantou Hsien, 8. VI. 1980, K. KUZUGAMI leg.

The present species is closely allied to *A. scatebrae* LEWIS from Japan (Figs. 3, 6), but the body is larger, more elongate and a little less convex above, the elytra are seriately punctate instead of punctate-striate, with different coloration and clearer metallic tinge, the humeral corners of elytra are more produced forward and conceal the basal angles of pronotum, the pronotum is wider, with sides more rounded and their borders narrower, the punctures on clypeus are denser.

Addia monticola sp. nov. (Figs. 2, 5)

The present species resembles very closely the preceding species, from which it is distinguished by the following points: The lateral borders of pronotum and of elytra distinctly thicker, their inner furrows deeper and a little wider (Fig. 2). The sides of elytra strongly curved inward on humeral corners, where the elytral borders prominent in thickness (distinctly reflexed) and more widely produced over the basal angles or baso-lateral parts of pronotum (Fig. 2). The pronotum somewhat wider, less rounded at sides, subflattened on lateral areas of disc and rather deeply emarginate at apex, with more produced apical angles. The elytra with rows of shallower punctures, not forming any vestigial striae in part. The 11th antennal joint in ♂ oblong instead of being oval. The microsculpture weaker on head and almost absent on pronotum. The body a little shinier. The aedeagus similarly shaped as figured (Fig. 5), but slightly slimmer.

Length: 7.0–7.2 mm. Width: 3.8–4.0 mm.

Holotype: ♂, Sungkang, Nantou Hsien, 2. VII. 1971, T. MAEDA leg. (in T. SHIBATA coll.); paratype: 1♀, Meifung, Nantou Hsien, 4. V. 1971, Y. HAYASHI leg.

The Genus *Clada* PASCOE of Taiwan[1]
(Coleoptera: Anobiidae)

By MASAHIRO SAKAI

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Shigenobu, Ehime, 791-02, Japan

Abstract Four new species of the genus *Clada* are described from Taiwan: *Clada shibatai*, *C. formosana*, *C. babai* and *C. vittula*. A new subgenus *Taiwanoclada* is established for *C. shibatai*. Taxonomic notes and a key to Taiwanese species are presented.

The genus *Clada* PASCOE, 1887 of the subfamily Hedobiinae is one of the largest and the most beautiful anobiids, and is widely distributed in Africa and Asia. Although there is no record from the Far East, I have noticed the occurrence of a few species in Taiwan since I examined the collection of Mr. T. SHIBATA in past years. Recently, I found out two specimens in a small series of Taiwanese anobiid specimens submitted to me for study from Dr. K. BABA. According to my reexamination of Taiwanese *Clada* carried out in this occasion, they were discriminated into four new species which will be described in the present paper.

Abbreviations used for the type depository are as follows: EEU=Entomological Laboratory, College of Agriculture, Ehime University, Matsuyama, SC=Collections of Mr. T. SHIBATA, Osaka.

Before going further, I wish to express my sincere thanks to Mr. T. SHIBATA who is a respectable coleopterologist, and generously offers me invaluable anobiid specimens for my study. Thanks are also due to Assoc. Prof. M. MIYATAKE and Mr. S. HISAMATSU for their constant guidance in my study, and to Dr. K. BABA and Mr. N. OHBAYASHI for their kind offer of materials.

Key to Taiwanese species of the genus *Clada*

1. Body black, with pronotum and elytra orange-colored. Eyes small, separated by more than twice their entire diameter. Elytra devoid of distinct granules. Male antennae pectinate, with the ramose segments each provided with a triangular process besides normal ramus·········*C.* (*Taiwanoclada*) *shibatai* subgen. et sp. nov.
— Body including elytra nearly concolorous, brown to blackish brown. Eyes large, separated by less than 1.7 times their entire diameter. Elytra provided with dis-

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1) Studies on the Anobiidae from Japan and neighboring countries, VIII.

〔Ent. Rev. Japan, Vol. XLII, Suppl., pp. 65–74, pl. 1, Dec., 1987〕

tinct granules. Antennae of male normally pectinate or serrate 2

2. Pronotum long, nearly as long as wide. Outer face of each tibia weakly ridged and pigmented, with trifurcate small spine at apex. Elytral costae fine, hardly raised. Median lobe of male genitalia devoid of process at apex .... *C. formosana* sp. nov.

— Pronotum transverse, more than 1.2 times as wide as long. Tibiae never ridged. Elytral costae notably raised. Median lobe of male genitalia with a rod-like or clavate process at apex 3

3. Body stout, at most 2.35 times as long as wide. Elytral costae including post-scutellar one well raised. Male antennae serrate .... *C. babai* sp. nov.

— Body slender, 2.5 times as long as wide. Elytral four costae less raised, and post-scutellar costa nearly obsolete. Male antennae pectinate .... *C. vittula* sp. nov.

Genus *Clada* PASCOE

Type species: *Clada waterhousei* PASCOE (by monotypy).

Clada PASCOE, 1887. Ann. Mag. nat. Hist., (5) 20: 8–9.

Paranobium GAHAN, 1900. Monogr. Christmas Island: 104.

Pseudoclada PIC et PIC, 1901. Wien. ent. Zeit., 20 (8–9): 170.

Xystrophorus LESNE, 1902. Ann. Soc. ent. Fr., 71: 476.

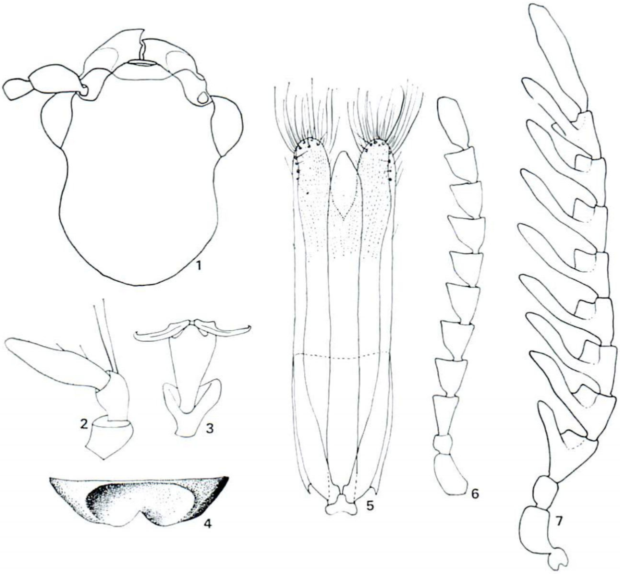
As was pointed out by ESPAÑOL (1983), the genus *Clada* is very similar to the genus *Hedobia* DEJEAN, 1821. Because of the discoveries of many polymorphic species of *Clada*, it became difficult to distinguish these two genera. Although the male pectinate antenna was one of the important diagnosis of *Clada*, some species of *Clada* having serrate or filiform antennae have already been discovered. The large eye is another character, important to distinguish *Clada*. However, I will describe a new species which has pectinate antennae and small eyes under a new subgenus of *Clada* in the present paper. In my view, the tarsal character presented by ESPAÑOL (1970) is not always sufficient to distinguish the two genera. I think that both genera will be united in the future.

Clada (*Taiwanoclada*) *shibatai* subgen. et sp. nov.

(Pl. 1, fig. 17; Text figs. 1–7)

Length: 4.8–7.4 mm; width: 2.3–3.4 mm.

Male. Body elongate-elliptical, a little more than twice as long as wide. Color black to blackish brown; prosternum, mesosternum, pro- and mesocoxae slightly diluted with brown; pronotum, scutellum and elytra yellowish orange to bright orange, though the undersurface of pronotum, the top of pronotal hump and scutellum are usually infuscate. Pubescence fine, yellow to orange on pronotum and elytra, white to white with yellowish brown luster on venter, dark brown with light brown luster on head and legs except for femora; pubescence on head erect to suberect, rather long, moderate in density in front, recumbent, short and dense on occipital area; pronotal pubescence dense, recurved,



Figs. 1–7. *Clada* (*Taiwanoclada*) *shibatai* subgen. et sp. nov. 1, Head of male; 2, maxillary palpus; 3, terminal two segments of front tarsus; 4, fifth abdominal sternite of male; 5, male genitalia; 6, female antenna; 7, male antenna.

directed mesially; elytral pubescence short, very dense, recumbent, directed posteriorly or postero-laterally, mingled with suberect recurved hairs on the whole surface; pubescence on venter apparently sparser and finer than that on dorsum, nearly appressed, though sparsely mingled with inconspicuous suberect hairs.

Head weakly constricted behind eyes, densely granulated; frontal area depressed; clypeus smooth, trapezoidal, strongly transverse, with a slight indication of punctures at sides; ridges over antennal insertions well developed. Eyes prominent, small, separated by twice their entire diameter, fringed with white long hairs on their lower half margin. Undersurface of head punctured behind eyes, granulato-asperate near eyes; gula smooth. Antennae 11-segmented, pectinate from 3rd to 10th, each ramus with a triangular process at the base as shown in fig. 7, 1st segment robust, 2nd shortest, a little longer than half of 1st, 3rd longest among pectinate segments, though the ramus is the shortest and the triangular process is the most obtuse, 4th to 10th nearly equal in length, with their rami being the longest in 7th, then becoming faintly shorter both distally and proximally, 11th longest, 4.6 times as long as wide.

Last segments of maxillary and labial palpi elongate-fusiform. Pronotum small and transverse, about 1.3 times as long as wide, 3/5 times as wide as elytra, moderately granulated in density, granules subequal in size to those on head, but much sparser; surface with a definite crest-like hump behind the center, depressed along anterior margin, neither marginated nor ridged at sides. Scutellum scutcheon-shaped, finely scabrous. Elytra conjointly about 1.9 times as long as wide, parallel-sided in basal 5/6; disc of each elytron with four indefinite costae; punctures moderate in size and density, devoid of incidental granules, confusedly arranged except on the areas just beside costae where the punctures are somewhat regularly disposed.

Prosternum very short before procoxal cavities; prosternal process also short, triangularly produced. Mesosternum with the excavation for the reception of procoxae relatively shallow; apex of mesosternal process obtusely pointed. Metasternum finely punctured, punctures dense at base and sides, becoming much sparser centro-apically; medio-longitudinal groove definite, but shallow, impressed in apical 2/5; metepisternum densely punctured. Abdominal sternites finely and moderately in density punctured, punctures gradually becoming finer toward distal sternites, 1st visible sternite longest, archedly produced at middle between metacoxae, 5th deeply concave except for sides, with the apical margin remarkably notched at middle. Legs stout, hairy; protibiae devoid of tibial spur; tarsal segments lobulate in 3rd and 4th, 5th nearly twice as long as wide. Male genitalia with lateral lobe densely covered with long hairs in apical 1/3; median lobe slender, subparallel-sided throughout.

Female. Very easily separable from male by the following characteristics: antennae serrate from 3rd to 10th; eyes slightly smaller, separated by about 2.2 times their entire diameter; 5th abdominal sternite not concave on disc, with the apical margin truncate.

Type series. Holotype: ♂, Nanshanchi, Central Taiwan, 7. IV. 1973, Y. KIYOYAMA leg. (EEU). Allotype: same locality as in holotype, 23. IV. 1974, S. TAKEDA leg. (EEU). Paratypes: 2♂♂, same locality as in holotype, 5. V. 1973, S. TAKEDA leg. (EEU and SC); 1♂, Liukuei, South Taiwan, 2. VI. 1972, S. TAKEDA leg. (SC); 1♀, Paling, North Taiwan, 25. IV. 1982, N. OHBAYASHI leg. (EEU).

Notes. This new species is rapidly distinguished from all previously known species by the following characters: pronotum and elytra orange-colored, eyes small, rami of male antenna characteristically branched as mentioned in the above description, elytral punctures devoid of distinct incidental granules and 5th abdominal sternite of the male deeply concave on the disc and strongly notched at the apical margin.

I belive that the above characters except for the coloration are significant at least for the subgeneric diagnoses. I want to establish a new subgenus, *Taiwanoclada* [type species: *Clada* (*Taiwanoclada*) *shibatai* sp. nov.] in the genus *Clada*.

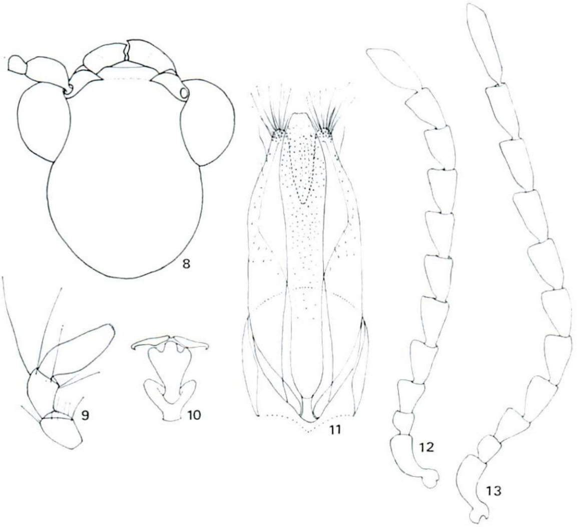
Clada formosana sp. nov.

(Pl. 1, fig. 18; Text figs. 8–13)

Length : 5.72–8.30 mm ; width : 2.44–3.45 mm.

Male. Body elongate-elliptical, about 2.3 to 2.4 times as long as wide. Nearly concolorous, brown to reddish brown, pronotum sometimes faintly infuscate. Pubescence very fine, dense, mostly recumbent, relatively long on head, pronotum, and on ventral surface of body ; elytral pubescence dual, appressed short hairs dense, directed posteriorly or postero-laterally, in a few cases irregular in direction on postscutellar area, suberect hairs recurved, mostly disposed linearly, though the hair is not always clearly discernible throughout the surface in all specimens.

Head finely but densely granulated ; frontal area including clypeus polished. Eyes large, well bulging, separated by 1.2 times their entire diameter. Antennae long, about 0.85 times as long as the length of elytra, weakly serrate from 3rd to 10th, 2nd shortest, a little shorter than ⅓ of 11th which is the longest, 3rd strongly dilated apically, 1.4 times as long as 2nd, 0.8 times as long as 4th, 4th to 10th slightly increasing in length apically, on the contrary the serration gradually



Figs. 8–13. *Clada formosana* sp. nov.
8, Head of male ; 9, maxillary palpus ; 10, terminal two segments of front tarsus ; 11, male genitalia ; 12, female antenna ; 13, male antenna.

weaker, 11th about 1.56 times as long as 10th. Last segment of maxillary palpus elongate-fusiform. Gular area polished, with a deep pit at the middle of each gular suture. Pronotum long, approximately as long as wide, densely granulated; pronotal gibbosity so strongly developed as to be a member of the genus *Trichodesma*. Scutellum elongate scutcheon-shaped, hairy. Elytra conjointly about 1.95 times as long as wide, well convex above, slightly depressed at postscutellar area, densely punctate, punctures moderate in size, provided with incidental minute granules, confusedly arranged except for the portions along four costae of each elytron which are so indistinct as to be just detectable.

Prosternum very short, marginated by carina. Mesosternum deeply excavated to receive procoxae in front, with the intermesocoxal process pointed at apex. Metasternum shining, finely and moderately in density punctured, with a pair of brief transverse carina before hind coxae; medio-longitudinal groove sharply impressed in posterior half. Abdominal sternites finely and densely punctured, punctures somewhat larger on 1st sternite, 3rd and 4th shortest, nearly equal in length on mid-line, 5th apparently depressed at middle, with the apical margin feebly emarginate. Legs relatively slender; outer face of tibiae weakly ridged, the ridges pigmented, usually denticulated, produced into trifurcate spine at the apical end; front tarsi with the 1st segment long, nearly equal in length to 2nd and 3rd combined, 3rd scarcely shorter than 2nd, weakly lobulate, 4th strongly bilobed, 5th dilated apically, 1.57 times as long as wide.

Female. Eyes smaller, separated by 1.46 times their entire diameter. Antennae short, 0.56 times as long as the length of elytra. 5th abdominal sternite rather deeply concave, with the apical margin rounded.

Type series. Holotype: ♂, Tapan, Taitung Hsien, Southeast Taiwan, 17. V. 1974, S. TAKEDA leg. (EEU). Allotype (EEU) and 5 paratypes (EEU and SC): same locality and collector as holotype, 15–17. V. 1974. Paratypes: 2 ♂♂, Nanshanchi, Nantou Hsien, Central Taiwan, 22. IV. 1973, S. TAKEDA leg. (EEU).

Notes. This new species is easily separable from all known species by the combination of the following characteristics: body concolorous; pronotum long, nearly as long as wide, with the pronotal gibbosity well developed just as in the genus *Trichodesma*; outer faces of tibiae provided with pigmented and denticulated ridges.

Clada babai sp. nov.

(Pl. 1, fig. 19; Text fig. 14)

Length: 4.38–8.25 mm; width: 2.08–3.85 mm.

Male. Body stout, elongate-elliptical, about 2.2 to 2.35 times as long as wide. Color blackish brown to reddish brown, antennae, palpi, gular area, prosternum, mesosternum and tarsi slightly diluted with red. Pubescence yellowish brown, short, appressed, moderate to sparse; elytra bearing pubescence more on the costae, forming definite four stripes on each elytron.

Head heavily granulated, granules large, separated by a distance less than their half diameter on vertex, though smaller and sparser in front; fronto-clypeal suture barely recognizable, nearly straight. Eyes large, well prominent, hemispherical, separated by 1.28 times their entire diameter. Antennae long, more than 7/10 times as long as the length of elytra, serrate from 3rd to 10th, 1st robust, recurved, 2nd shortest, about 1/3 of 11th which is the longest, 3rd through 10th nearly equal in length, but the serration gradually weaker apically. Last segment of maxillary palpus elongate-fusiform. Undersurface of head smooth on gula and its vicinities; gular suture distinct, with a pit at the middle, pigmented behind the pit and pigmented or scarcely furrowed before the pit. Pronotum transverse, about 1.2 times as wide as long, about 2/3 times as wide as the width of elytra, widest behind middle, densely granulated, granules larger than those on head, flattened, provided with a setigerous fine papilla on their summit; pronotal gibbosity well raised, strongly depressed bilaterally. Elytra conjointly about 1.83 times as long as wide, parallel-sided in basal 4/5, finely granulated, granules much finer than those on head; punctures small but deep, confusedly arranged on the whole surface; each elytron with well raised four costae and a indistinct short postscutellar costa which extends obliquely from the base of 1st costa to the suture behind scutellum.

Prosternum very short. Mesosternum deeply excavated for the reception of procoxae, with mesosternal process narrowly truncate at apex. Metasternum finely, densely granulated at sides, punctate at middle; medio-longitudinal groove impressed in apical half, provided with punctures in the bottom. Abdominal sternite finely punctured, punctures somewhat larger at middle on 1st sternite, especially on the intercoxal process, 5th flattened centro-apically, with the apical margin nearly straight or faintly emarginate. Legs stout; front tarsus with the 1st segment nearly equal in length to 2nd and 3rd combined, 3rd weakly, and 4th strongly lobulate respectively, as long as 4th, 5th 1.5 times as long as wide. Median lobe of genitalia with a short rod-like process at apex.

Female. Body thicker than male, about 2.1 times as long as wide. Eyes smaller, separated by about 1.7 times their entire diameter. Antennae decidedly shorter, less than half the length of elytra, apical margin of 5th abdominal sternite gently rounded throughout.

Type series. Holotype: ♂, Liukuei, South Taiwan, 31. III. 1986, K. BABA leg. (EEU). Allotype: same locality and collector as holotype, 29. III. 1986. (EEU). Paratypes: 1♂, same locality as holotype, 26. IV. 1974, S. Takeda leg. (SC); 1♂, Kenting Park, Southernmost of Taiwan, 9. IV. 1970, T. Kobayashi leg. (EEU).

Notes. This new species is somewhat resemble *Clada mouhoti* (Pic) and *C. tesselatus* (Pic) in having the serrate antennae in both sexes, but is rapidly separable from the two by the characters of body sculpture and vestiture. The new species is very similar, at a glance, to *C. vittula* sp. nov. described in the following line except for antennal characters of the male.

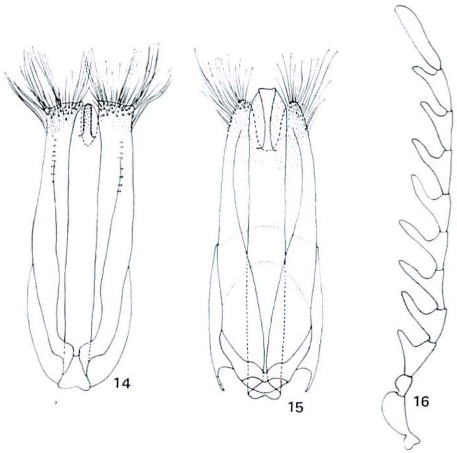
Clada vittula sp. nov.

(Pl. 1, fig. 20; Text figs. 15, 16)

Length: 6.8 mm; width: 2.8 mm.

Male. Body elongate, subcylindrical, about 2.5 times as long as wide. Color blackish brown, antennae, palpi, labrum, clypeus, tarsi and gular area more or less reddish. Pubescence fine, short, dense and appressed, directed to vertex on head, directed to the summit of gibbosity on pronotum, and directed posteriorly on the rest of body.

Head densely granulated, granules define, relatively large, separated by equal to or less than their own diameter at vertex; clypeus polished. Eyes large, hemispherically bulging, separated by 1.26 times their entire diameter. Antennae 11-segmented, pectinate from 3rd through 10th, 1st segment robust, recurved, nearly equal to 3rd in length, 2nd rotundate, about as long as wide, 3rd long, 2.4 times as long as 2nd, with the ramus short, about ⅔ times as long as the length of the segment, 4th a little shorter than 3rd, with the ramus relatively long, apparently longer than the length of the segment, 5th through 10th subequal in length and shape, though their ramus gradually becoming shorter toward apical segments, 11th longest. Last segment of maxillary palpus elongate-fusiform. Gula smooth, with a deep pit near the apex of each gular suture which is never sulcated and is only pigmented. Pronotum transverse, about 1.24 times as long as wide, densely and definitely granulated, granulation similar to that of head, though



Figs. 14–16. 14, *Clada babai* sp. nov.; 15, 16, *Clada vittula* sp. nov.
14, 15, male genitalia; 16, male antenna.

the granules somewhat larger; disc of pronotum with a definite gibbosity at center. Scutellum scutcheon-shaped, faintly longer than wide, so hairy as to conceal the dermal sculpture. Elytra elongate, conjointly 1.95 times as long as wide, parallel-sided in basal 7/9, finely granulated throughout, granules much finer than those on pronotum; each elytron with four undeveloped costae; punctures confusedly arranged at base, apex and at the area between suture and 1st costa, on the rest area punctures regularly aligned, forming 3 rows between costae.

Prosternum short, finely scabrous, marginated by keel, with short and triangular prosternal process. Mesosternum deeply excavated for the reception of procoxae in repose; apex of mesosternal process truncate. Metasternum finely granulated, without any trace of punctures; medio-longitudinal groove deeply indicated in apical half. Abdominal sternites mat, owing to microsculptures, granules sparse, minute; 5th abdominal sternite feebly depressed at center, faintly elevated beside the depression, with the apical margin truncate. Legs stout; front tarsus with the 1st segment nearly twice as long as 2nd, 3rd shortest, 4th strongly lobulate, 5th gradually dilated apically, about 1.7 times as long as wide. Median lobe of genitalia slender, parallel-sided, with a clavate process of which the apex is truncated.

Female. Unknown.

Type series. Holotype: ♂, Musha, Central Taiwan, 21. VII. 1974, Y. KIYOYAMA leg., attracted to the light (EEU).

Notes. This new species will be separated from *Clada sublineata* PIC from India by the larger body, more vaguely indicated stripes of elytral costae and the more elevated pronotal gibbosity.

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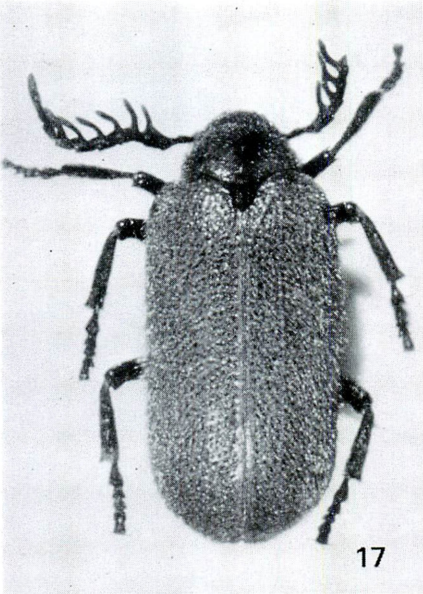
Explanation of plate 1.

Pl. 1, fig. 17. *Clada* (*Taiwanoclada*) *shibatai* subgen. et sp. nov.
18. *Clada formosana* sp. nov.
19. *Clada babai* sp. nov.
20. *Clada vittula* sp. nov.



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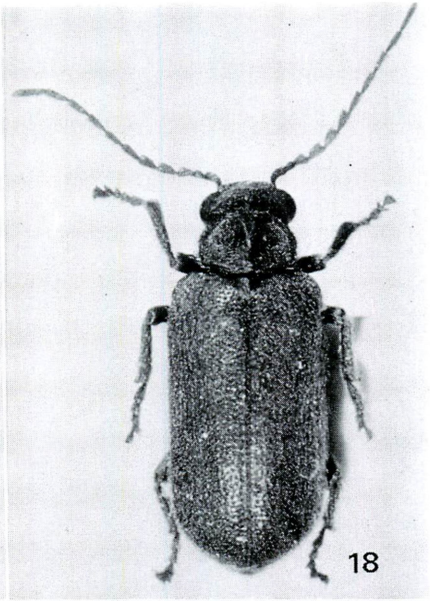

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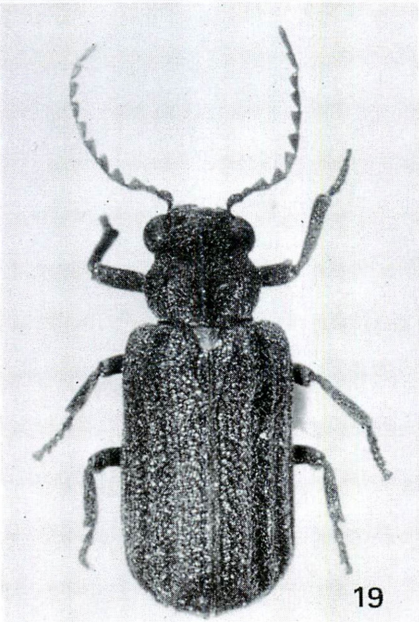

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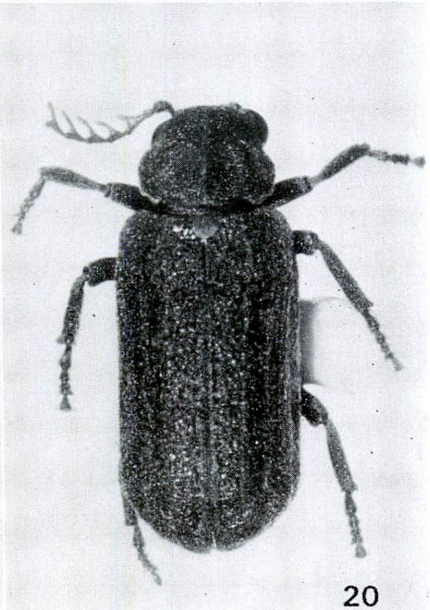

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(M. SAKAI photo.)

Two New Species of the Genus *Oxytelopsis* from Japan and Taiwan (Coleoptera, Staphylinidae)

By TATEO ITO

Oxytelopsis-species have been widely distributed in the Oriental region including Taiwan, but unrecorded from Japan. In this paper I have tried to describe a new Japanese and a new Taiwanese species of the genus.

I dedicate this short paper to Mr. TAICHI SHIBATA, who has been devoting his life to the development of the coleopterological studies till the 60th anniversary of his birth, and to whom I wish to express my cordial thanks for the constant guidance and encouragement of my studying on Staphylinidae. I am also greatly indebted to Dr. K. SAWADA for his valuable advice in this study and to all the members of the Osaka Coleopterological Society for their deep kindness in literature, materials and some ways.

Oxytelopsis shibatai sp. nov. (Fig. 1)

Body mat, dark reddish brown, mandibles reddish brown, antennal segments (basal ones dark reddish brown), lateral sides and apices of abdominal segments, femora and tibiae pale reddish brown, mouth parts and tarsi sordid yellow. Length: 2.7-3.2 mm.

Head trapezoidal, wider than long (13 : 10), uneven and coarsely sculptured above, the sculpture composed of reticulate-punctures in irregular size, that on frons weak and small, on vertex slightly irregularly arranged and more or less granule-like, on postgenae more regularly arranged and larger than on vertex, clypeo-apical side thickly bordered by a serial ridge, which extending backward to near neck along inner side of each eye, frons somewhat shiny, subcircularly depressed, vertex slightly convex as well as on supra-antennal areas, and obsoletely sulcate in middle, the convexity surrounded by a U-shaped depression, of which both the ends linked anteriorly with the frontal subcircular depression, postgenae swollen dorsally, rounded laterally and twice as long as eye, eyes small and prominent, antennae scarcely reached to middle of pronotum, 1st to 3rd segments longer than wide, 4th smallest and as

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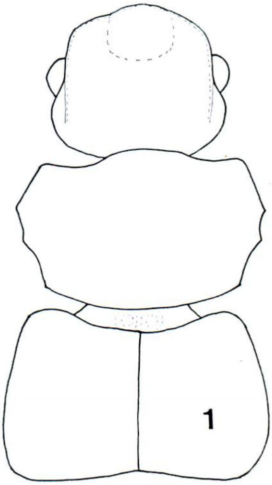

Fig. 1. *Oxytelopsis shibatai* sp. nov.

long as wide, 5th to 10th transverse and gradually incrassate distally, 11th as wide as and twice as long as 10th. Under side of head with postgenae finely rugosely sculptured, penultimate segment of maxillary palpi a little shorter and much wider than ultimate one, mentum irregularly punctured, submentum strongly coarsened, tentrial foveae distinct and deep but not contiguous to each other, neck clearly umbilicately punctured.

Pronotum 1.5 times as wide as long, wider than head (13 : 10), gently protuberant mid-apically, evenly arcuate basally, lateral sides thickly marginate and regularly serrulate among two rather large denticles (one near middle, the other at basal fourth), apical angles blunt, basal ones acute; disc more coarsely sculptured than on head, longitudinally sulcate along middle, on each lateral side of the sulcus with two, inner and outer, depressions, and bearing a subapical short bristle situated just between the sulcus and the inner depression.

Elytra transverse, a little shorter and wider than pronotum (9 : 10; 6 : 5), slightly dilated behind, irregularly granulate, with short sparse yellow hairs along sutural, apical and lateral sides, widely depressed in middle of each elytron, the granules oblong and subseriate, those on lateral sides almost continuous to each other and forming a few fine ridges. Wings reduced, nearly as long as elytral length, doubtlessly unfunctional.

Abdomen expanded laterally, sparsely finely punctured except middle of ventral side, each of the punctures with a short yellow seta, all sternites and apical two tergites with a few long setae. In male, 6th sternite weakly but 7th strongly depressed in middle, apical margin of 6th sternite with some short hairs, that of 7th protuberant post-medianly, the protuberance well-chitinized, ascendant to apex, its apical area flattened and covered with short yellow hairs, 8th sternite trilobed and bearing a central tubercle (Fig. 2). Legs robust and short, tibiae weakly sulcate on outsides, under sides of tarsi bearing some long hairs.

Male genitalia symmetrical, parameres thin in ventral view but not slender in lateral view, deeply sinuate dorso-basally, and subapically with a few short setae on inner sides (Fig. 3).

Holotype: ♂, Imoyama, Yamato-Kamiichi, Nara Pref., 2. VI. 1984, T. ITO leg. (T. SHIBATA coll.). Paratypes: 25♂♂, 26♀♀, same data as holotype.

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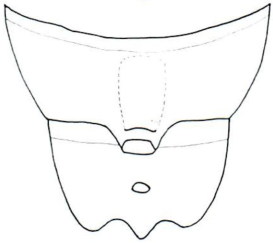

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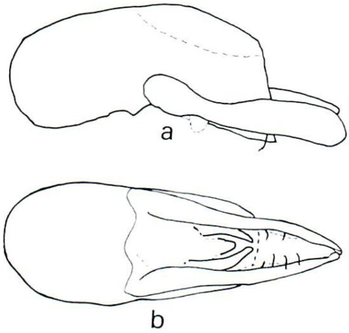

Figs. 2, 3. 2. The 7th and 8th sternites in ♂ of *Oxytelopsis shibatai* sp. nov.
3. Male genitalia of *Oxytelopsis shibatai* sp. nov. a: in lateral view, b: in ventral view.

Specimens examined: 3♂♂, 1♀, same data as holotype.

The present new species is peculiar from all the other known species of the genus in having the head with a marginal ridge distinct and extending backward for the greater part of its length. In the character of the short elytra it is analogous to the following related species, but is separable from *O. bengalensis* BISWAS et SEN GUPTA, *O. ceylonicus* HAMMOND, *O. montanus* HAMMOND and *O. jaljulensis* COIFFAIT by the proportionally longer elytra or wings, from *O. lucidula* CAMERON by the different-colored head and pronotum, from *O. brevipennis* BERNHAUER by the less transverse pronotum.

It has been taken in company with *Anotylus crassicornis* SHARP and *A. funebris* BERNHAUER.

Oxytelopsis taiwanus sp. nov. (Fig. 4)

Body mat, dark reddish to blackish brown, antennae, lateral sides and apices of abdominal segments, femora and tibiae reddish brown, mouth parts and tarsi yellow. Length: 2.8 mm.

Head wider than long (10 : 7), more regularly and more coarsely sculptured than in the preceding species, the sculpture on frons obsolete, on vertex and postgenae clearly retiform, but the sculpture irregularly arranged on extreme lateral sides of postgenae, clypeo-apical side thickly marginate and clearly truncate, frons subpentagonally depressed and shiny, vertex slightly convex and weakly sulcate along middle, postgenae flattened dorsally, angulately dilated laterally, widest at near middle, and straightly narrowed thence to neck, less than twice as long as eye, antennae with 7th to 10th segments twice as wide as long. Under side

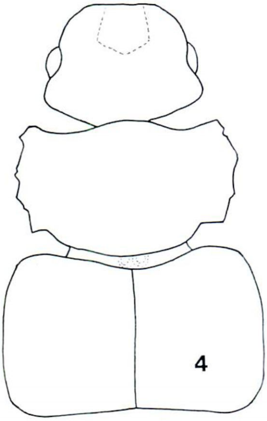

Fig. 4. *Oxytelopsis taiwanus* sp. nov.

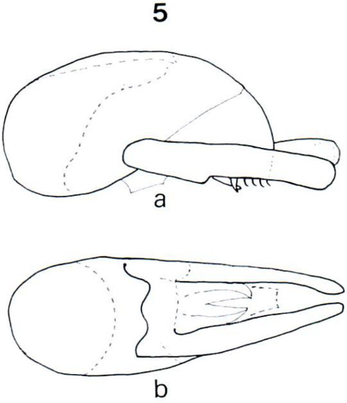

Fig. 5. Male genitalia of *Oxytelopsis taiwanus* sp. nov. a: in lateral view, b: in ventral view.

of head with postgenae granulately sculptured, submentum slightly coarsened, tentrial foveae shallow, and neck weakly punctured.

Pronotum 1.7 times as wide as long, a little longer and much wider than head (8 : 7; 3 : 2), usually protuberant mid-apically, base strongly emarginate on each side, lateral sides coarsened, irregularly serrulate among three or four denticles; disc more coarsely and more reticulately sculptured than on head, sulcate along middle, on each side of the sulcus depressed as in the preceding species.

Elytra flattened, a little longer and wider than pronotum (12 : 11; 13 : 11), slightly dilated toward apex, uniformly and seriately with granules, lateral sides thickly margined by sharp subserrulate edges, fully-winged.

Abdomen finely punctured and finely pubescent except middle of each sternite. In male, 7th sternite weakly sinuate in middle of apical margin, each side of the sinuation bearing a tubercle and some short hairs, 8th bisinuately excised at apical margin. Legs robuster than those of the preceding species.

Male genitalia robust, parameres dorsally without any sinuations (Fig. 5).

Holotype: ♂, Fenchifu, Chiyai Hsien, Taiwan, 24. III. 1970, T. KOBAYASHI leg. (T. SHIBATA coll.). Paratypes: 1♀, same data as holotype; 1♂, ditto, 4. V. 1983, T. ITO leg.; 1♀, Mt. Yangming, Taipei Hsien, Taiwan, 30. IV. 1982, T. ITO leg.

Specimen examined: 1♂, same data as holotype.

The present species is nearly related to both *O. cimicoides* FAUVEL and *O. pseudopsina* FAUVEL from Burma, but it may be distinguished from *O. cimicoides* in having the head truncate at apex, the pronotum less transverse, the elytra shorter, from *O. pseudopsina* in having the postgenae well-developed and straightly narrowed behind, the lateral sides of pronotum roughened and with the distinct denticles, the 9th and 10th segments of antennae less transverse, about twice as wide as long.

The Two New *Catops*-species from Tanba, Japan (Coleoptera : Catopidae)

By Yasuhiko Hayashi

The new species of being reported in this paper may belong to *hilleri*-group because of the male genitalia and antennae having similar structure. Mt. Amaishi (type locality of the new species) occupies a block of Taki Mts., a typical low mountaineous district, and has flora composing of deciduous broad-leaved secondary forest. All the holo- and allotypes are preserved in T. Shibata's collection.

I am very glad to dedicate this paper to Mr. Taichi Shibata for celebration of his 61st birthday. He has constantly given me various aids for my taxonomic study of Coleoptera. And I greatly appreciate all helps of the members of the Osaka Coleopterological Society for my research. I have largely owed my taxonomic study of Coleoptera to the collection accumulated through their own collecting effort.

Catops shibatai sp. nov. (Figs. 1a–f)

Body oblong-oval, rather shining and covered with brownish yellow recumbent pubescence ; head black, pronotum dark brown, elytra reddish brown but slightly infuscate and fairly opalescent backward, mouth organs brownish yellow, antennae dark brown with basal 1 or 2 segments yellowish, legs brown with protarsi yellowish. Length : 3.5–4.1 mm.

♂: Head three-fifths as wide as pronotum, with punctures dense and moderate in size, microsculpture obsolete and reticulate. Eyes of moderate size, very sparingly ciliate. Antennae (fig. 1b) thick, moderately long, and hardly reaching pronotal base ; 1st to 3rd segments distinctly but 4th slightly longer than wide, 5th slightly and 6th to 10th fairly wider than long, 1st to 6th segments decreasing distally in length, 5th, 9th and 10th subequal in length to each other, 6th two-thirds as long as wide and half longer than 8th, 7th as long as 4th and 2.3 times as long as 8th, which is 2.5 times as wide as long, and 11th fairly longer than wide and a little shorter than 1st ; 6th to 9th segments distinctly depressed beneath, bottom of the depressions mat, with microsculpture minutely and strongly subreticulate. 4th segment of maxillary palpi a little longer than 3rd (1.1 : 1.0).

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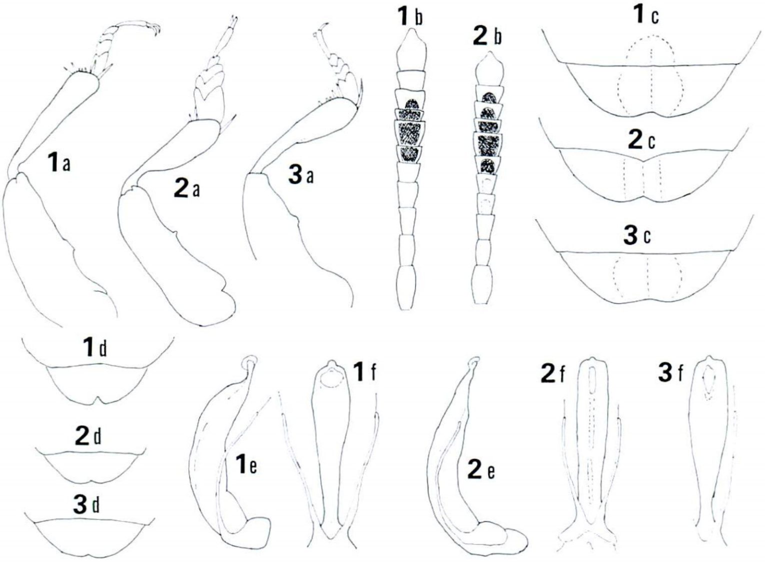
Pronotum about half wider than long, five-sixths as wide as and one-third as long as elytra, the widest point placed just behind middle, from which sides gently arcuate, more strongly narrowed in front than behind, basal angles widely rounded, and basal margin gently arcuate backward but very slightly bisinuate-truncate at middle; disc coarsely, sparsely and strongly granulate-punctate, without visible microsculpture. Elytra nearly 1.5 times as long as wide, weakly arcuate at sides, rather more finely, sparsely and weakly punctate than on pronotum, microsculptured by weak, fine and transverse lines, and striae vestigial except sutural one.

Mesosternum strongly microsculptured by fine lines with extremely fine, sparse punctures and fine, short pubescence. Metasternum finely and sparsely granulate-punctate, with microsculpture weakly and finely subreticulate. Abdominal sternites finely and rather densely granulate-punctate, microsculpture obsolete but somewhat linear; apical margin of 6th sternite (fig. 1d) narrowly and subtriangularly notched at middle.

Profemora (fig. 1a) bearing a large but low tubercle at middle of under side; protibiae substraight, fairly thickened distally and with



Figs. 1–3. 1a–f. *Catops shibatai* sp. nov.; 2a–f. *Catops tanbaensis* sp. nov.; 3a, c, d, f. *Catops hilleri* KRAATZ.

a. ♂ anterior leg; b. ♂ antennae; c. ♀ 4th and 5th sternites; d. ♂ 5th and 6th sternites; e. ♂ genitalia, lateral view; f. ditto, dorsal view.

inner margin straight; basal 3 segments of protarsi and 1st segment of mesotarsi moderately dilated; metafemora beneath with a suboval and large depression subapically.

Median lobe of male genitalia (figs. 1e, f) gradually thickened distally to apical fifth in dorsal view, then subparallel-sided toward subtruncate apex, widely, elliptically and strongly depressed dorsally just before the apex, which is bearing a conspicuous large tubercle at middle, and evenly arcuate ventrally in lateral view; lateral lobes slender and moderate in length.

♀: 5th antennal segment nearly as long as wide and 6th to 9th not depressed; 4th segment of maxillary palpi about 1.4 times as long as 3rd; 4th abdominal sternite (fig. 1c) weakly and semicircularly depressed before middle of apical margin, 5th rather strongly depressed along middle; legs slender and simple as usual.

Holotype: ♂, Mt. Amaishi, Sasayama-cho, Hyogo Pref., 20. X. 1980, Y. HAYASHI leg.; allotype: ♀, same locality as holotype, 9. XI. 1979, Y. HAYASHI leg.; paratypes: 7♂♂, 8♀♀, same locality as holotype, 9, 19. XI., 22. XII. 1979, 5, 27. IV., 26. X., 7, 25. XI. 1980, 8. V. 1984, Y. HAYASHI leg.

Specimens examined: 283 exs., same locality as type-series, 9, 19. XI., 8, 15, 22. XII. 1979, 2. I., 27. II., 15, 19. III., 5, 26. IV., 5, 7. V., 13, 15, 20, 21, 26, 28, 30. X., 2, 4, 7, 11, 14, 17, 19, 21, 25, 28. XI., 1, 5, 8. XII. 1980, Y. HAYASHI leg. (all the specimens captured with chicken trap).

Although the new species remarkably resembles *C. hilleri* KRAATZ (figs. 3a, c, d and f) from Japan in general appearance, it is distinguishable from *hilleri* by the following points: in the new species 8th antennal segment shorter, 6th more than 1.5 times as long as or 7th also 2.3 times as long as 8th, 8th 2.5 times as wide as long, while in *hilleri* 8th antennal segment longer, 6th 1.2 times as long as and 7th 1.6 times as long as 8th, 8th at most twice as wide as long; in ♂ of the new species inner margin of the protibiae straight, apical margin of 6th abdominal sternite narrowly and rather deeply notched at middle and median lobe of the genitalia with a large and elliptical depression just before the apex, but in ♂ of *hilleri* inner margin of the protibiae weakly but distinctly emarginate, apical margin of the 6th abdominal sternite rather widely and shallowly notched at middle and median lobe of the genitalia with a drop-shaped and semitransparent fovea in apical portion; in ♀ of the new species 4th segment of the maxillary palpi longer, about 1.4 times as long as 3rd and the 4th abdominal sternite with a depression, while in ♀ of *hilleri* 4th segment of the maxillary palpi shorter and at most 1.1 times as long as 3rd and 4th abdominal sternite without depression.

The present new species, however, is much more closely related to *C. tuberculatus* SZYMCZAKOWSKI from Burma in having similar structure of ♂ protibiae, genitalia and of ♀ 4th and 5th abdominal sternites, but in *tuberculatus* 8th antennal segment is much shorter, 6th is 1.9 times as long as and 7th 2.9 times as long as 8th, 8th is nearly 3.4 times as wide as long, and median lobe of the male genitalia bears only a small tubercle at middle of the apex.

Catops tanbaensis sp. nov. (Figs. 2a–f)

Body suboval, lustreless and with rather sparing yellowish recumbent pubescence; head blackish, pronotum dark brown to blackish brown with lateral sides widely dull orange-brown, elytra dusky orange-brown but slightly darkened and opalescent backward, mouth organs brownish yellow except pitchy mandibles, antennae reddish brown, slightly darkened distally, with basal 2 segments brownish yellow, legs reddish brown but profemora yellowish and hind legs somewhat infuscate. Length: 3.1–3.9 mm.

♂: Head a little less than two-thirds as wide as pronotum, extremely finely and linearly microsculptured, moderately and rather densely punctate. Eyes moderate in size and sparingly ciliate marginally. Antennae (fig. 2b) rather thick, moderately long and reaching basal angles of pronotum; basal 4 and 11th segments distinctly longer than wide, 5th slightly and 6th to 10th distinctly wider than long, 1st much longer than 2nd, which is almost as long as 3rd, 4th a little shorter than 3rd (1.0: 1.2) or slightly longer than 5th (1.1: 1.0), 6th as long as but fairly wider than 5th (9: 7) and about 1.5 times as long as 8th, 7th slightly longer than 4th, a little wider than 6th or 8th (10: 9) and nearly 1.8 times as long as 8th, 8th twice as wide as long, 9th almost as long as 10th, slightly shorter than 6th and as wide as 7th, 10th and 11th, 11th twice as long as but slightly shorter than 1st; 6th to 10th segments clearly depressed beneath, bottom of the depressions weakly shining and finely, linearly microsculptured. 4th segment of maxillary palpi 1.1 times as long as 3rd.

Pronotum about 1.5 times as wide as long, nearly one-third as long as and five-sixths as wide as elytra; sides uniformly rounded and from post-median point a little more narrowed in front than behind, basal angles obtuse and narrowly rounded, basal margin arcuate backward but faintly bisinuate-truncate at middle. Elytra about two-thirds as broad as long, widest at basal two-fifths, rather finely, sparsely and weakly granulate-punctate, with a weak and transversely linear microsculpture, and striae indistinct except sutural one.

Mesosternum very finely and sparsely punctate on finely and linearly microsculptured derm. Metasternum finely and sparsely granulate-punctate and microsculptured by very minute meshes. Abdominal sternites finely granulate-punctate, the punctures rather sparse on basal segment but dense on the rest; 6th sternite (fig. 2d) with a small and shallow notch at middle of apical margin.

Profemora (fig. 2a) beneath with a small tubercle at middle; protibiae (fig. 2a) substraight at outer margin, rather deeply emarginate basally in the inner margin, and abruptly thickened apically; basal 3 segments of protarsi and 1st one of mesotarsi rather strongly dilated; metafemora with a distinct large and suboval depression near apex of under side.

Median lobe of male genitalia (figs. 2e, f) thick even at base, rather subparallel-sided throughout, finely, weakly but distinctly impressed dorso-medianly, in lateral view gently curved ventrally and gradually tapered apically from middle, the dorsal impression joined to a semi-transparent elongate-suboblong fenestra in apical portion, apex subtruncate and bearing a small tubercle at the middle; lateral lobes slender and rather short.

♀: 6th antennal segment about 1.5 times as long as and 7th 2.3 times as long as 8th, 6th to 10th not depressed; 4th abdominal sternite (fig. 2c) weakly but distinctly protuberant backward at middle of the apical margin, which is weakly emarginate laterally, 5th strongly depressed medianly; legs slender and simple as usual.

Holotype: ♂, Mt. Amaishi, Sasayama-cho, Hyogo Pref., 6. III. 1980, Y. HAYASHI leg.; allotype: ♀, same locality as holotype, 19. XI. 1980, Y. HAYASHI leg.; paratypes: 4♂♂, 1♀, same locality as holotype, 12. I., 2. II., 6. III., 5. XII. 1980, Y. HAYASHI leg.

Specimens examined: 3 exs., same locality as holotype, 6. III., 28. XI. 1980, Y. HAYASHI leg. (all the specimens captured with chicken trap).

The present new species obviously belongs to *hilleri*-group on account of similar structure of the male genitalia, antennae and profemora, but it is easily distinguishable from the known Japanese species of *hilleri*-group in having the male protibiae markedly dilated internally in apical half, the median lobe of male genitalia thick even at the base and in ♀ apical margin of the 4th abdominal sternite distinctly protuberant at the middle.

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